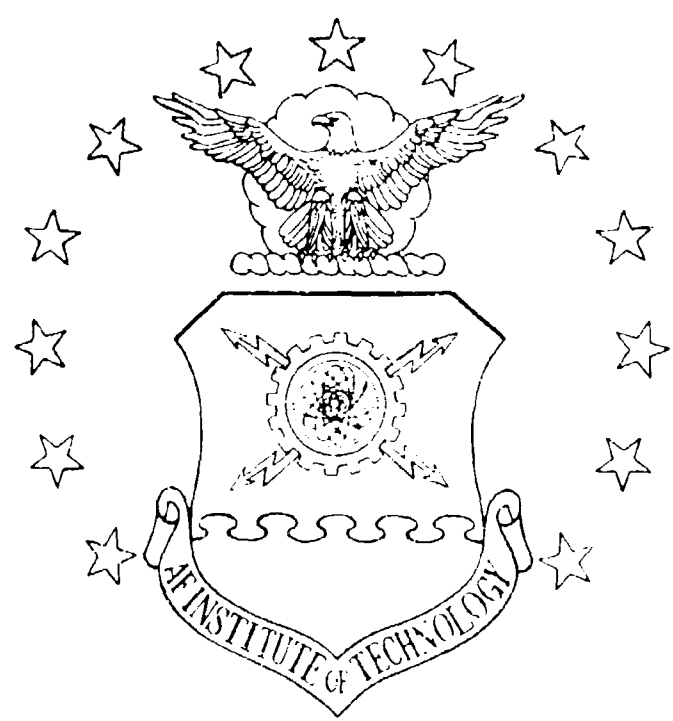


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ASSESSMENT OF INITIAL TECHNICAL TRAINING
FOR USAF SUPPLY OFFICERS

THESIS

Edmund R. Brodeur, Jr.
Captain, USAF

Karen W. Currie
Captain, USAF

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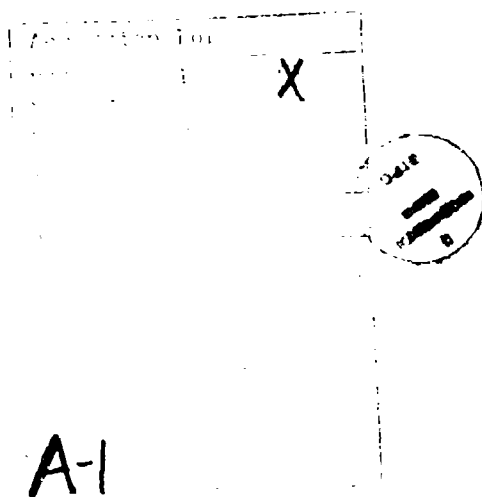
THESIS

Edmund R. Brodeur, Jr.	Karen W. Currie
Captain, USAF	Captain, USAF

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ASSESSMENT OF INITIAL TECHNICAL TRAINING
FOR USAF SUPPLY OFFICERS

THESIS

Presented to the Faculty of the School of Systems and Logistics
of the Air Force Institute of Technology
Air University
In Partial Fulfillment of the
Requirements for the Degree of
Master of Science in Logistics Management

Edmund R. Brodeur, Jr., B.A.
Captain, USAF

Karen W. Currie, B.A., M.A.
Captain, USAF

September 1984

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Edmund R. Brodeur, Jr.

Karen W. Currie

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Abstract

Headquarters Air Training Command is currently working several initiatives to improve technical training for officers in the Supply Management Utilization Field (AFSC 64XX). This research project was designed to determine if company grade supply officers found their initial technical training adequate and how supply technical training could be improved. The researchers surveyed all Air Force company grade supply officers regarding their perceptions of the adequacy of their initial technical training, the Supply Operations Officer Course (SOOC). The mail survey asked the officers to indicate whether or not additional topics should be added to the SOOC. They were also asked to indicate the usefulness of a suggested list of topics and to write in any potential topics not listed. The survey concluded with requests for demographic information such as rank, sex, education level, type of degree, length of service, and so on. Sixty-one percent of the surveys were returned. Two hundred and twelve returned comment sheets included suggestions for improving supply officer training.

Statistical analysis of the data indicated initial technical training for supply officers needs improvement. While basically satisfied with the structure of the SOOC, respondents indicated a desire for training to be more technically oriented, with emphasis placed on interpreting computer-generated management products and using them to solve branch problems. Most significantly, respondents demonstrated strong belief in the value of practical job experience as a prerequisite to attending initial technical training.

Those officers who showed the strongest dissatisfaction with their technical training were those, in most cases, with less than four years of Air Force supply experience. Formal on-the-job (OJT) programs for new supply officers, coupled with revised initial technical training, would provide the greatest benefit to the Air Force and the officers themselves. Specific suggestions for revising initial technical training are presented.

ASSESSMENT OF INITIAL TECHNICAL TRAINING
FOR USAF SUPPLY OFFICERS

1. Introduction

Purpose

The purpose of this research project was to report the perceptions of United States Air Force supply officers regarding the adequacy of their initial technical training. This project determined in which aspects Air Force supply officers felt their training was adequate and in which aspects they felt it was inadequate. This project attempted to discover which topics in the present training curriculum should be deleted or expanded, if topics should be added to make the curriculum more relevant to initial duty assignments in the supply career field, or what other changes could be made to improve initial technical training. When curriculum planning officials at Air Training Command evaluate supply officer technical training, this research project will give them an additional source of information about the adequacy of existing technical training and the perceptions of supply officers regarding their training.

Background

Military supply officers must manage one of the largest inventories in the world. Supply officers must constantly strive to balance the demands of rapidly-increasing levels of technology, higher standards for weapon system availability, and budget constraints. Supply officers must

be able to coordinate the needs of many organizations involved in national defense:

The supply manager of the future must respond to the changing nature of weapons support requirements. He will need to become a "techno-economist." He must have the skills necessary to deal with the technician who is attempting to keep an intricate weapon system operational and effective; and he must also be able to deal with the business community--its legalistic contracts, specification problems, labor difficulties, and profit orientation. Able practitioners of supply management will require varied and time-consuming preparation through a cycle of work experience and training [27:145].

Air Force Supply. Air Force supply activities are divided into two principal areas: wholesale and retail. On the wholesale level, Air Force Logistics Command (AFLC) provides logistics support for the Air Force mission through its five Air Logistics Centers. AFLC stores and manages commodities by focusing on individual items as well as major weapons systems (23:12-2). On the retail level, the Standard Base Supply System (SBSS) orders, receives, stores, and issues supplies, equipment, and fuel to support the local mission. The SBSS requisitions the required commodities from the wholesale system or obtains them by local purchase through the base contracting function. Through standardized computer hardware and software, the SBSS performs inventory control, materiel accounting, and finance operations for the three classes of supply items: consumables, recoverables, and equipment. Consumables are those items consumed as they are used, such as office supplies, bolts, wire, and paint. Recoverable items, parts of a larger assembly such as an aircraft, can be repaired for reuse. Equipment items are end items in themselves not consumed through use, such as vehicles, power tools, and furniture. Much effort is expended at the wholesale level to determine the proper category and reference code

of each item issued through the supply system. More than 45,000 different items are handled through the average SBSS account (32:13-1 through 13-9). An Air Force supply officer's career will normally consist of assignments to both the wholesale and retail levels.

Air Force Specialty Codes. Air Force officer career fields are categorized by the Air Force Specialty Code (AFSC), a four-digit numerical code. The first two digits refer to the utilization field or the broad career area. The third digit refers to the specialty within the utilization field, and the fourth digit indicates whether the officer is serving at the entry level (inexperienced) or fully-qualified level (experienced). The entry-level AFSC is usually awarded upon completion of technical training (or equivalent job experience), while the fully-qualified AFSC is awarded after a specified period of satisfactory performance in that job specialty. The officer's primary AFSC (PAFSC) is the awarded AFSC in which he or she is "... best qualified to perform duty" (10:para 1-1g). The duty AFSC is the AFSC in which the officer is serving (10:para 1-1k). The AFSC is used to classify jobs, determine qualifications, make assignments, and develop career progression programs (13:para 1a).

Supply Management Utilization Field. The Supply Management Utilization Field is denoted by the digits "64." As Air Force Regulation (AFR) 36-1, Officer Classification, states:

The Supply Management Utilization Field encompasses program formulation, policy planning, direction, administration, management, and operation of all supply activities. Included in this field for assigned supplies, equipment, and petroleum products are functions of design, development, and analysis of automated or manual accounting systems; requirements determination and computation; allowances and authorizations; inventory and distribution control; accountability; reporting; stock fund operating programs preparation; and operations operating budget preparation (13:A17-17/18).

A fully-qualified Supply Management Staff Officer holds AFSC 6416, while an officer newly-assigned to that specialty would have AFSC 6411 (entry-level). A Supply Management Staff Officer usually serves as the commander of an SBSS squadron or in a staff position at a headquarters organization. A supply officer with less experience or time in service usually directs a branch of an SBSS squadron. A fully-qualified junior officer serving at the base level would have AFSC 6424, Supply Operations Officer, while an officer at the entry-level would have AFSC 6421. The typical supply officer would begin his or her career with AFSC 6421 and progress through AFSCs 6424, 6411, and 6416 as his or her assignments changed and experience levels increased (13:A17-17/18 through A17-22). A more detailed explanation of career progression in the Supply Management Utilization Field is found in Appendices A and B.

On 14 January 1984, there were 1,266 Air Force officers serving in the Supply Management Utilization Field: 325 lieutenants, 479 captains, 271 majors, 161 lieutenant colonels, and 32 colonels (21).

Basic Education and Training

College Preparation. Before they are eligible for commissioning in the United States Air Force, individuals must earn a baccalaureate degree from an accredited college or university or one of the U.S. service academies (16:3-50). For assignment to the Supply Management Utilization Field with the entry-level AFSC (6421), AFR 36-1 requires a bachelor's degree, preferably in business administration, accounting, petroleum engineering, chemical engineering, industrial management, or engineering (13:A17-21). To serve as a Supply Management Staff Officer (AFSC 6416/6411), the following education is preferred: master's degree in business

administration, economics, management, industrial management, industrial engineering, petroleum engineering, chemical engineering, or computer sciences (13:A17-19).

However, many officers selected to serve in the Supply Management Utilization Field do not possess the "desired" or "preferred" educational background. AFR 36-23, Officer Career Development, recommends these officers ". . . should seek off-duty or other education opportunities in business management, or quantitative methods" (11:para 30-1c).

Professional Military Education. The education and training of Air Force officers is focused on two distinct areas: professional military education (PME) and specialty knowledge (15:para 1-4). AFR 53-8, USAF Officer Professional Military Education System, defines PME as ". . . the systematic acquisition of theoretical and applied knowledge of the profession of arms" (15:para 2-1). Every officer, regardless of career field, is required to obtain the knowledge of military matters provided by PME (15:para 1-4a). The three commissioning sources (service academies, Reserve Officers' Training Corps, and Officer Training School) provide PME to prospective line officers through precommissioning programs, or basic military training for officers. These programs include instruction in communication skills, leadership and management, human behavior, professional knowledge, defense studies, physical fitness, and drill (16:para 3-50). Commissioned Air Force officers continue their study of professional military matters through correspondence or seminar courses, or resident attendance at Squadron Officer School, Air Command and Staff College, Air War College, and equivalent schools of other services.

Specialty Training. Specialty knowledge training, or specialized professional education, ". . . is designed to provide the competence, understanding, knowledge, or skills needed for full qualification in an Air Force specialty" (15:para 1-4b). Therefore, specialized professional education is unique for every Air Force career utilization field or AFSC. The foundation of the officer's specialty knowledge is formed by the officer's basic college education. The Air Force then designs programs of instruction to prepare the officer to serve in the specific career utilization field. Successful completion of Officer Basic Technical Training leads to the award of a technical AFSC at the entry level. Officer Advanced Training results in the award of a staff level AFSC at the entry level. Technical training for supply officers is provided on the basic and advanced levels (see Appendix C).

Technical Training

Supply Operations Officer Course. The Supply Operations Officer Course (SOOC) is recommended for all lieutenants and captains newly-assigned to the career field. Conducted at Lowry Technical Training Center, Colorado, the course is 23 days long and is designed to teach the management of the Standard Base Supply System using the UNIVAC 1050-II computer. Subjects covered include: Wholesale/Retail Supply Operations, Materiel Support Procedures, Materiel Management, Customer Support and Storage, Supply Systems/Management, and special topics (28:Atch 1, 16:3-67).

Fuels Management Officer Course. The Fuels Management Officer Course is required for supply officers assigned to fuels management positions. The course is 25 days long and is conducted at Chanute Technical Training Center, Illinois (16:3-67).

Supply Systems Management Reports and Listings Course. The Supply Systems Management Reports and Listings Course (SSMRLC), developed for those already familiar with the Standard Base Supply System, is designed to improve the officer's use of computer products to manage the SBSS and to solve problems. This course includes records management, Air Force stock fund, resource management systems, equipment and materiel management, inventory procedures, document control, and use of management reports and listings to solve branch and section management problems. Personnel may not attend this course within two years of attendance at the SOOC or the Supply Management Staff Officer Course (6411). The SSMRLC, 13 days in length, is conducted at Lowry Technical Training Center (16:3-67).

Supply Management Staff Officer Course. The Supply Management Staff Officer Course prepares officers (captains and above) with six or more years' experience with the SBSS for staff positions. Fully-qualified field grade officers in other logistics career fields are eligible to attend after completing the SSMRLC. Topics discussed in the Supply Management Staff Officer Course include management and analysis of supply and fuels accounts, relationships between the SBSS and other base support functions, and SBSS relationships with wholesale agencies. This course, conducted at Lowry Technical Training Center, lasts 15 days (16:2-66 through 3-67).

Advanced Professional Education

In addition to formal technical training, AFR 36-1, Officer Classification, lists as "desirable" the completion of an "advanced management course in supply and logistics" for Supply Management Staff Officers. For Supply Operations Officers, AFR 36-1 lists as "desirable" the following

courses: automatic data processing, systems analysis techniques and management analysis, inventory and stock fund management, defense fuels systems, and nuclear and nonnuclear munitions management (13:A17-20 through A17-22). Supply officers usually acquire this advanced education through Air Force Institute of Technology (AFIT) programs or off-duty education.

School of Systems and Logistics. The School of Systems and Logistics, located on the campus of the Air Force Institute of Technology at Wright-Patterson Air Force Base, Ohio, is the graduate management school of the Air Force. The School of Systems and Logistics conducts graduate and professional continuing education (PCE) courses in the areas of systems, logistics, and engineering management. Supply officers may apply through their major command training offices to attend PCE (short course) programs in AFLC Materiel Management, Logistics Management, and other related logistics topics. Supply officers may also apply for admission to the Master of Science in Logistics Management program, a 15-month resident course offered by the School of Systems and Logistics. Since 1982, supply officers have had the opportunity to take the Inventory Management option within the Logistics Management graduate program (1:169-173,199).

Education-With-Industry. Education-With-Industry (EWI) programs give officers on-the-job training and experience in working with industries involved in national defense (11:para 2-4(3)). The Supply Management (EWI-CIP456) program is a ten-month management internship in the business logistics operation of a large U.S. corporation. To apply, officers must be fully-qualified Supply Management Staff Officers or Supply Operations Officers with three years' current experience in the Supply Management

Utilization Field. EWI programs prepare officers for future executive positions and do not lead to academic degrees or credit (16:4-57).

Off-Duty Education. Officers may pursue an advanced degree through part-time study at civilian colleges and universities. Many universities conduct night classes in base facilities which result in resident credit towards a degree. Depending upon the officer's eligibility, the Air Force will reimburse part of the tuition, or the officer can draw upon his or her Veterans' Administration benefits (12:65).

Literature Review

Training Assessment. Air Training Command Regulation (ATCR) 52-12, Training Evaluation, requires all Technical Training Centers to evaluate their AFSC-awarding courses on an annual basis. Evaluations are prepared from field evaluation questionnaires (mail surveys), field visits, personal interviews with graduates and their supervisors, feedback from major commands (MAJCOMs) on the quality of graduates, and end-of-course student critiques. If the initial evaluation indicates that training is satisfactory, the preparation of a formal Training Evaluation Report (TER) may be waived. The maximum allowable time between preparation of TERs is two years. Feedback from MAJCOMs on the adequacy of training is documented on an AF Form 1284, Training Quality Report (2:2).

The most recent TER on the SOOC was prepared by the Lowry Technical Training Center in January 1983. The TER was based on two field visits to Air Force bases and field evaluation questionnaires mailed to 60 individuals graduating from the SOOC between 20 November 1981 and 22 July 1982. No AF Forms 1284 were received from the MAJCOMs during the period of this TER (28:1-5).

The field evaluation questionnaires were designed to evaluate the adequacy of the course training in relation to the duties and tasks required of the graduates working in the field. The report concluded:

Findings based on the graduates' field evaluation questionnaires indicate that training on 21 of 40 questionnaire tasks was inadequate. Utilization of 3 of the 40 tasks was below minimum criteria. Final analysis indicates that graduates are undertrained [28:1].

The 21 tasks rated inadequate by the graduates were concentrated in the areas of Materiel Support Procedures, Customer Support and Storage Distribution, Supply Systems Management, and Materiel Control Responsibilities. Graduates indicated that three tasks were not performed frequently enough to warrant training: preparing file maintenance computer inputs, analyzing base interrogation cards, and analyzing equipment out-of-balance listings. Overall, adequacy of course training relative to duty performance was rated satisfactory or better by 80 percent of the graduates (28:3-4).

The TER also summarized the end-of-course student critiques:

- (1) Use case studies of real field situations.
- (2) Cut out some basics and include management.
- (3) Reduce time on microfiche.
- (4) Tour of base supply desired.
- (5) Study guide/workbooks not current with AFM 67-1 [USAF Supply Manual].
- (6) Objectives poorly written. [28:5-6]

There were 108 graduates of the course in Fiscal Year (FY) 81 and 106 graduates in FY 82 (28:2).

Supply-Related Studies. Considering the importance of technical training for the supply career field, the amount of research specifically addressing USAF supply officer training issues is limited. Captains Michael R. Concannon and Robert E. Grate, in their 1970 AFIT thesis, The Development and Test of a Job Inventory For a Job Analysis of the 64XX Supply Officer

Utilization Field, validated a mail survey job inventory to identify the duties and tasks of a sample of supply officers. This job inventory was developed in anticipation of conducting a job inventory of the entire supply career field (8:59).

In a student paper prepared for the Air Command and Staff College in 1974, Major Leonard J. Dobias analyzed management development for Air Force officers, using the Supply Management Utilization Field as his principal area of study. He found management development in the Air Force to be adequate, given the instruction available to officers through professional military education, technical training, off-duty education, and job experience. Major Dobias did recommend that all official guidance relating to management development should be gathered together and placed in one special manual, or at least be placed in a separate chapter in AFR 36-23, Officer Career Development. He recommended that the Air Force should attempt to follow more closely the official preferences for educational background, since only 63 percent of supply officers at that time had the desired educational background. He also recommended the supply operations course be made mandatory. Major Dobias suggested that his course should put more emphasis on the fundamentals of management and less on the technical aspects of supply. Additionally, he recommended that supply officers should have a greater opportunity to attend PME in residence since it appeared that supply officers did not receive a proportionate share of in-residence quotas. He also suggested that supply officers' qualifications should be more carefully examined before award of the fully-qualified AFSC (17:93-97). Major Dobias seemed to indicate that, in general, supply officers needed more management training.

In a 1976 student paper for Air Command and Staff College, Major Woodrow A. Anderson examined the Supplies Management Branch at base supply and recommended a number of management techniques to improve operations in the most critical areas of that branch. He believed that improved management was necessary because of Department of Defense austerity programs, the increasing complexity of the logistics field, use of management information systems, and the wide-spread perception held by many in the defense community that logistics was unimportant in peacetime (3:1). He explained his reasoning for concentrating on base-level supply operations:

The large number of varied assignments for which a Supply Officer is vulnerable frequently result in assignment of officers to Base Level Supply functions without previous Standard Base Level Supply (1050-II) experience. This situation, along with the voluminous and technical basic supply procedures contained in AFM 67-1, tends to overwhelm officers initially and can contribute to degradation of customer support (3:11).

After reviewing a number of management techniques appropriate to base supply operations, Major Anderson made several recommendations. First, the dangers of relying on certain system performance measurements generated by standardized computer programs should be included in the Supply Management Staff Officer Course. Second, AFM 67-1, USAF Supply Manual, should be reorganized and rewritten so that lower-level workers and managers could more easily understand it, or a new, less complex manual should be written on base-level supply operations (3:59). Major Anderson's central tenet was that new supply officers were often not prepared to meet the challenges of a base supply job.

Another document of interest to newly assigned base supply officers is Major Thomas C. Nettles' Handbook for New Supply Officers. This Air Command and Staff College paper, written in an informal style, was designed to bridge

the gap between technical training and an officer's first base-level assignment. Major Nettles explained how the supply officer fits into the wing-base mission, how to deal with some common problems, and gave some ideas on supervision, leadership, management, and career development (29:iii-iv).

These supply officer studies indicate that initial technical training frequently does not give new supply officers adequate information to serve in their initial duty assignments. Majors Anderson and Nettles wrote their papers to combat this information gap. Major Dobias indicates that management education for supply officers needs to be improved, as well as the procedures for selecting officers to enter the supply career field. These ideas are reflected in several studies concentrating on selection and training of officers for other logistics careers in the Air Force.

Other Logistics Studies. In a 1974 AFIT thesis, Mr. William R. Drake and Captain Michael F. Loughman, Jr. used a survey to analyze the education, experience, and skills of a sample of Logistics Plans and Programs Officers (AFSC 6bXX) assigned to Air Force Logistics Command. The main purpose of the study was to determine the future talent requirements of officers in that career field in the 1980's. The authors recommended the educational standards listed in AFR 36-1 be followed more closely and officers in the career field should be encouraged to make up any technical deficiencies through graduate education, short courses, extension courses, or other forms of study (18:82-85).

Captain Clinton F. Gatewood and First Lieutenant Timothy D. Bair examined the training and career development of aircraft maintenance officers in their 1982 AFIT thesis. After conducting a survey of aircraft maintenance officers, they concluded that AFR 36-23 did provide valuable career

development guidance, that aircraft maintenance officer training courses should retain a heavy technical orientation, and that selection procedures for officers entering that career field should be made more stringent, with an emphasis on business and engineering degrees (4:126-131).

A 1983 AFIT thesis examined another USAF logistics career field. By means of a survey, Captains Brian R. Kerins and Ray A. Kiracofe analyzed the management development needs of transportation staff officers and whether those needs should be considered at the Transportation Staff Officer Course. Kerins and Kiracofe also conducted structured interviews of senior transportation policy makers. The researchers concluded that the most critical needs for management development were in the areas of communication, human relations, leadership, and management skills. Kerins and Kiracofe also recommended several content changes in the area of transportation management, data automation, logistics planning techniques, knowledge of war and mobilization plans, knowledge of microcomputer operations, knowledge of the national transportation system, and additional knowledge of mathematics, economics, and computer programming. They also recommended the development of a course for senior transportation officers and gave suggestions for course content (25:53-57).

A number of AFIT theses have studied the usefulness of the AFIT graduate logistics programs. Among the most recent of these, Captains Kenneth R. Brown and David Hollingsworth surveyed officers who graduated from the school between 1963 and 1978. As a result, Brown and Hollingsworth recommended a greater share of AFIT graduates should receive assignments requiring their advanced training, rated graduates should be more effectively utilized, and supervisors should be made aware of the advanced skills possessed by AFIT graduates to make better use of the graduates' abilities (5:60-61).

These related logistics studies show that adequacy of technical training and type of academic degree are serious concerns in other logistics fields. While maintenance and logistics plans officers indicated a need for more technical education, transportation officers indicated a need for more management training. This difference could be attributed to the way the studies were conducted. For example, the Kerins and Kiracofe thesis concentrated on determining management development needs. However, the general conclusion seems to be that officers serving in logistics career fields need more and better training (either technical training or a particular kind of degree) to keep them current with their constantly changing technological and human environments.

Research Plan

Justification. Because of increasing austerity measures, Air Force personnel must accomplish more with less. Junior officers no longer have the luxury of "learning the ropes" under the guidance of an experienced senior noncommissioned officer. New supply officers must be productive as soon as they report to their units for duty. Since the grace period of on-the-job training is so minimal, formal technical training is more critical than ever. Because the 1983 TER on the Supply Operations Officer Course (6421) indicated graduates were undertrained, the authors decided a more thorough investigation of initial technical training for supply officers was justified. Concurrently with the development of this research project, the Air Staff (HQ USAF/LEY) was working on a Program Management Document to improve supply technical training for officers and enlisted members. Some of the related problems mentioned at the 1984 Logistics Conference (20-23 March 1984, Sheppard Technical Training Center) included poorly

qualified instructors, need for structure in the officer training program, inadequate training in wholesale supply procedures, inadequate MAJCOM review of course content, and growth of specialized training requirements. The conference report stated, "Future actions will be taken to make needed changes in instructor qualification and assignment policies, officer training courses, and use of computer assisted instruction" (5:8).

The Lowry Technical Training Center will host a Supply Career Training Development Conference on 27-31 August 1984. Representatives from the Air Staff, Air Training Command Headquarters, MAJCOM supply staffs, and the technical training center will discuss changes to supply officer technical training. Results of this research project will be presented to conference participants.

Statement of the Problem. Did United States Air Force officers serving in the Supply Management Utilization Field (AFSC 64XX) perceive they were adequately trained to fulfill their assigned duties?

Research Objective. The objective of this study was to determine if United States Air Force supply officers perceived their initial technical training (Supply Operations Officer 6421) adequately prepared them to fulfill their assigned duties. If USAF supply officers believed their training inadequate, this study attempted to determine how the course could be changed to improve its usefulness and relevance.

Research Hypotheses. The research hypotheses tested in this study fall into three categories: content of the SOOC curriculum, timing of attendance at the SOOC and subsequent base level supply assignments, and personal attributes of the supply officers. Since the purpose of this research was to determine whether or not USAF supply officers believed they

had been adequately prepared by the SOOC to fulfill their assigned duties, the basic hypothesis tested was:

H1: USAF supply officers perceived that the Supply Operations Officer Course (6421) adequately prepares them to fulfill their assigned duties.

Given the conclusion of the 1983 Lowry survey that graduates of the SOOC are undertrained (28:1), it was probable that this null hypothesis would be rejected in favor of the alternative; namely, that USAF supply officers perceive that their entry-level training is inadequate. The remaining hypotheses were founded on the assumption that basic technical training for supply officers was inadequate. These hypotheses were developed to attempt to determine how technical training could be improved and whether certain identifiable subgroups within the supply officer corps shared common perceptions regarding the adequacy of training.

To determine how technical training could be improved, it was necessary to test hypotheses regarding the actual course subjects, the emphasis placed on each, and whether any topics ought to be added to the 6421 course curriculum. The first of these hypotheses was:

H2: All subjects included in the Supply Operations Officer Course (6421) are not useful to course graduates in performing their duties as supply officers.

If this null hypothesis was not rejected in favor of the alternate, it indicated that some subjects were not as useful as others and possibly could be eliminated if it were necessary to add new subjects. In addition to the particular topics included in the course, it was necessary to test an hypothesis regarding the coverage, or proportion of course time, allotted to each topic:

H3: All subjects included in the Supply Operations Officer Course (6421) are given the proper emphasis, or proportion of course time.

If this null hypothesis was rejected in favor of the alternate, it would indicate that certain subjects could receive more or less emphasis in order to improve the usefulness of the course to graduates. Finally, to determine if other topics should be added to the course curriculum, it was necessary to test the following hypothesis:

H4: No additional topics should be added to the Supply Operations Officer Course (6421).

If this hypothesis was rejected in favor of the alternate, then it would be necessary to determine which topic should be added to the course curriculum.

To determine supply officers' general beliefs about the nature and content of their basic technical training, it was necessary to propose several other hypotheses:

H5: The Supply Operations Officer Course (6421) includes too much theory.

H6: Supply officers believe their technical skills are adequate.

H7: The Supply Operations Officer Course (6421) includes enough technical information to permit supply officers to adequately fulfill their duties.

H8: The Supply Operations Officer Course (6421) includes information that is valuable and useful beyond the first two supply assignments.

The rejection of any of these null hypotheses indicated that changes were needed in course direction and content.

The next group of hypotheses were devised to determine if perceptions of training adequacy and timing of attendance at the 6421 course were related. These hypotheses addressed the idea of career progression:

- H9: Supply officers should attend the Supply Operations Officer Course (6421) before serving in a supply position.
- H10: The Supply Systems Management Reports and Listings Course (6424) is not offered at the appropriate time in a supply officer's career.
- H11: The Supply Systems Management Reports and Listings Course (6424) provides information that is not useful on the job.
- H12: Supply officers believe that on-the-job experience is better preparation for supply management than formal technical training.
- H13: The year in which supply officers attended the Supply Operations Officer Course (6421) has no effect on their perceptions of training adequacy.
- H14: The number of assignments between officers' attendance at the Supply Operations Officer Course (6421) and subsequent assignments to base level supply positions has no effect on their perceptions of training adequacy.

Rejection of any of these null hypotheses indicated that timing of supply officers' attendance at technical training and their assignment to base level supply positions needed to be carefully examined.

The final group of hypotheses attempted to determine if a relationship existed between individual characteristics and perceptions of training adequacy. These hypotheses were formulated to relate personal and demographic data:

- H15: Supply officers' educational backgrounds have no effect on their perceptions of training adequacy.
- H16: Supply officers' sources of commission have no effect on their perceptions of training adequacy.
- H17: Supply officers' rank has no effect on their perceptions of training adequacy.
- H18: Supply officers' length of commissioned service has no effect on their perceptions of training adequacy.
- H19: Supply officers' prior enlisted service has no effect on their perceptions of training adequacy.

H20: The sex of supply officers has no effect on their perceptions of training adequacy.

H21: The command level of their present assignments has no effect on supply officers' perceptions of training adequacy.

H22: Supply officers' years of supply experience have no effect on their perceptions of training adequacy.

Rejection of any of these null hypotheses permitted the identification of certain subgroups who hold differing views on the adequacy of training. This enabled the researchers to identify demographic factors possibly affecting the respondents' opinions. These demographic factors, once identified, could be evaluated as potential reasons to alter the way initial technical training for supply officers is presently conducted. For example, a detected difference in training perceptions between officers with the kinds of academic degrees recommended by AFR 36-1 and officers who do not possess those kinds of degrees could indicate the need for a change in training or accessions policy.

Chapter Summary

This chapter introduced the basic concepts of the U.S. Air Force supply system and the Supply Management Utilization Field for Air Force officers. After a discussion of the college preparation, professional military education, and technical training necessary for U.S. Air Force officers, specific technical training and other educational opportunities for supply officers were described. A review of the literature relevant to supply officer technical training followed this discussion. The chapter concluded with justification for studying supply officer technical training and an explanation of the hypotheses formulated to assist the researchers in answering the question, "How can initial technical training for USAF supply officers be improved if necessary?"

II. Methodology

Introduction

After defining the problem, the next step was to determine a logical method for collecting data and transforming that data into information relevant to the research objective. This chapter will explain the choice of the study population, data collection method, design of the survey instrument, and data analysis and hypotheses testing.

Defining the Population

The population of interest to the study was all USAF active duty captains and lieutenants with a primary Air Force Specialty Code (PAFSC) of 64XX, Supply Operations Officer. This group was chosen because most of its members had graduated from basic supply technical training since 1974. Prior to that date, basic supply technical training was very different since the majority of the supply management information systems currently in use had not yet been implemented. In addition, technical training is more meaningful, as well as a more recent experience, for company grade officers involved in daily SBSS operations than to higher-ranking officers in upper management positions.

Stanley Truskie explained in a 1982 Personnel Journal article that there are four ways to measure the success of management development programs:

1. Measuring the likes and dislikes of the participants.
2. Measuring the achievement of the instructional objectives.
3. Measuring the behavioral change back on the job.
4. Measuring the change within the organization [35:66].

Adapting this measurement hierarchy to the concept of military officer technical training, it was apparent only the first level of measurement was

possible. The longitudinal spread of the subjects, as well as their dispersion among many different Air Force and Department of Defense (DOD) activities, made the other levels of measurement impossible in the context of this research project. Therefore, the researchers elected to collect information directly from the subjects themselves.

The researchers chose to conduct a census of this population because of its relatively small size (804). While a one hundred per cent response was not expected, it was assumed the response rate would be adequate to meet the two basic premises of sampling:

One is that there is enough similarity among the elements in a population that a few of these elements will adequately represent the characteristics of the total population. The second premise is that while some elements in a sample underestimate a population value, others overestimate this value [19:83].

The researchers assumed the responses from the census would comprise the sample and that both premises listed in the above quote were met by this sample.

Data Collection

After defining the population, it was necessary to develop a method for gathering information from that population. Interrogation or questioning is a principal method for data gathering and it was selected as the means to determine the perceptions of supply officers regarding their technical training (19:86-87). Since supply officers are located all over the world, it was necessary to choose the most efficient and cost effective method possible to conduct the questioning process.

While the personal interview survey has the highest response rate (81.7%), it is also extremely costly in terms of time and money and is affected by interviewer bias (39:39). Telephone surveys have an excellent

response rate (72.3%) but they are also costly (39:39). Telephone inquiries also reflect another kind of bias because of the quick answers the respondent must give. Mail surveys have a reputation for built-in bias (inflexible questions) and low response rates: 47.3%, for example (39:39, 24:440). However, the main attribute of the mail survey is its low cost. It has many others:

Market researchers have long recognized the obvious advantages of mail questionnaire surveys. They are relatively low in cost, geographically flexible, and can reach a widely dispersed sample simultaneously without the attendant problems of interviewer access or possible distortions of time lag. Difficult to reach respondents, such as farmers, soldiers, or busy executives, can be surveyed with relative ease [24:440].

Other advantages include elimination of interviewer cost, freedom from interviewer bias, anonymity, and more time for a conscientious reply from the respondent (24:440).

Analyzing the survey methods and comparing them to the given constraints were relatively simple tasks. With an extremely limited budget and a limited amount of time, the choice was obvious: a mail survey. It provided the researchers the ability to gather data from a widespread population at minimum cost. The response rate was a major concern. However, past theses produced at AFIT and personal interviews with AFIT faculty members indicated that low response rates were not normally a problem for AFIT researchers. Higher response rates are generated by the nature of the respondent group and their inherent interest in the subject (26:63). Surveys conducted by AFIT are primarily sent to DOD employees (military and civilian). The bond of a common employer increases the response rate from the 47.3% average experienced in a typical survey to a response rate that often exceeds 75% for an AFIT survey (38).

Therefore, the choice for survey method was the mail survey. The attributes of the mail survey match the requirements of this research project. The advantages of mail surveys make them popular with researchers: "There is little doubt that the mail survey will continue to be a major methodology in educational research" (20:78).

The survey instrument was mailed to all captain and lieutenant supply officers with PAFSCs of 64XX through official distribution channels. The mailing list of names and duty addresses was obtained through the Advanced Personnel Data System at the Air Force Manpower and Personnel Center, Randolph Air Force Base, Texas. Cover letters explaining the purpose of this research project, optical scan (opscan) answer sheets, and pre-addressed, postage-paid return envelopes were included with the survey instrument. Respondents' names did not appear on the completed answer sheets to guarantee them anonymity. The responses on the opscan answer sheets were read into files in the AFIT Harris 800 computer and then transferred to the Cyber computer for analysis using the Statistical Package for the Social Sciences (SPSS) and custom-written programs. Open-ended responses were compiled manually.

Survey Instrument Construction and Validation

The survey instrument (Appendix D) was divided into three main categories: questions relating to personal attributes of the respondents, questions relating to the adequacy of the present training curriculum (SOOC), and questions relating to recommended additions to training. The format of the survey was loosely based (with the authors' kind permission) on the survey instrument used in the Blair and Gatewood thesis (4). The recipients of the survey were asked to mark their answers on the opscan answer

sheet provided, and to return that answer sheet along with the last page of the survey which contained several open-ended questions.

The questions designed to collect demographic information and other data on the respondents' career progression in relation to attendance at technical training were Questions 1, 2, 23, and 54 through 68. These were objective multiple choice questions. The majority of these questions were placed at the end of the survey instrument in order to avoid overwhelming the respondent with requests for personal information at the beginning of the survey.

The second category of questions was designed to determine the respondents' perceptions of the adequacy of the present curriculum used in the SOOC (see Appendix E). The six major topic headings, along with the lessons included under each heading, were taken from the course curriculum and listed in the survey (35). Each major topic heading was listed twice. The first time each heading appeared, respondents were asked to rate the usefulness of that topic to their supply officer duties on a 7-point Likert scale. Questions dealing with training adequacy in this manner were 3 through 14. Items 15 through 22 were statements regarding the general nature and direction of technical training for supply officers. Respondents were asked to indicate their agreement or disagreement on a 7-point Likert scale. Questions 24 through 26 asked the respondent about timing of attendance at the SSMRLC and course relevance, with answers given on a 7-point Likert scale.

The third major category of the survey instrument addressed the issue of additions to the curriculum of the SOOC. Question 27 asked respondents if additional topics should be added. If the response was positive, respondents were asked to proceed to Questions 28 through 52 and rate the usefulness

of proposed additions to the curriculum on a 7-point Likert scale. Items 28 and 29 were suggested by the personal experience of several supply officers. Items 30 through 52 were lesson topics derived from the intermediate course, the SSMRLC (37). A list of course topics is found in Appendix F. Question 53 gave the respondent the opportunity to indicate that other topics not listed should be added. These additional topics could be listed on the last page of the survey instrument.

The survey instrument was validated by asking AFIT students and other officers at Wright-Patterson Air Force Base with AFSC 6424 to evaluate it and provide recommendations for improvement.

Data Analysis

The data must be classified before analysis can begin. The Likert scale is comparable to an elastic scale where the intervals may not be equal. Emory states, "The Likert scale is ordinal only . . ." (19:74). Therefore, the median is the measure of central tendency and nonparametric statistics must be used to analyze the data collected (19:23).

Hypothesis testing is the establishment of an alternative hypothesis (desired outcome) and a null hypothesis (opposite of the alternative hypothesis). Examination of the hypothesis is based on test statistics. A typical test would compare a selected critical value against a test statistic (32:100-104). A decision rule would establish when the null hypothesis could be rejected and the alternative hypothesis accepted.

Possible errors associated with hypothesis testing are the Type I (alpha error) where the null hypothesis is true but rejected, and the Type II (beta error) where the null hypothesis is false but accepted (9:79).

These possible errors emphasize the importance of selecting a proper alpha level since it will amplify the likelihood of one error type or another. For purposes of this study the alpha level was set at .10, yielding a confidence level of 90 per cent. The alpha or significance level controlled the selection of critical values. Significance levels were reported in the third chapter to enable the reader to evaluate the results using other alpha levels. A variety of statistical tests were available in the Statistical Package for the Social Sciences (SPSS). Two nonparametric ordinal data tests selected for use in this study were the Sign Test and the Kruskal-Wallis Test. Brief descriptions of these tests follow.

Sign Test. This statistical test is a binomial test. Data must be ordinal and the test must involve a comparison of two related populations. This test compares paired variables. In this study, the Sign Test compared the median Likert scale value of "4" against all responses. The underlying null hypothesis for all Sign Tests was zero difference in the medians, meaning in this study that half the population agreed with a given statement and half disagreed (34:68). The purpose of this test was to derive a general positive or negative trend of the respondent group's beliefs to the question at hand. Since the alpha level selected was .10, this necessitated a rejection of the null hypothesis whenever the two-tailed p value was less than the alpha level designated. The two-tailed p value was the probability of an extreme value z occurring (34:73; 22:227-228; 29:291-293). Since the Sign Test ignored neutral or no-opinion responses a cut-off point for validity was established. Any questions where response value "4" (neutral response) exceeded 25 percent of the total responses was considered

an invalid or inconclusive question. The number of responses in each category was reported in the third chapter for the reader to draw his or her own conclusions.

Kruskal-Wallis. This test compared population medians and had the power to compare multiple populations. A test of this kind was invaluable for multiple analysis of different population characteristics against the various response categories (22:237-238). The initial breakdown from this test could determine which group (captains, those with undergraduate degrees only, or individuals with prior enlisted service, for example) perceived training to be more or less adequate. The Kruskal-Wallis Test was simple and contained a correction for tied responses. If the null hypothesis was rejected, no additional tests were required. General formulas to be used in this test were found in Siegel's Nonparametric Statistics for the Behavioral Sciences (34:188).

Frequencies. The third function of SPSS to be utilized for data evaluation was the descriptive statistics area. This program, Frequencies, possessed the characteristics necessary for analysis of the data gathered. The variables of this study were discrete or categorical, or both, which was a basic characteristic of this program. In Frequencies, the data was evaluated by classes and placed into the frequency categories of absolute, relative, adjusted, and cumulative. The program output could be arranged according to nine other options including histograms, charts, and various tables. The additional capability to evaluate statistical information such as the mean, median, and range was optional (7:32-34; 31:194-201). This SPSS program was used for initial break-out and evaluation of the entire data base and permitted examination of survey areas showing possible relationships.

Hypothesis Testing

Primary Hypothesis. The primary hypothesis of this study was H1.

H1: USAF supply officers perceive that the Supply Operations Officer Course (6421) adequately prepares them to fulfill their assigned duties (Questions 15 and 21).

H_o: The SOOC (6421) adequately prepares USAF supply officers to fulfill their assigned duties.

H_a: The SOOC (6421) does not adequately prepare USAF supply officers to fulfill their assigned duties.

A Frequencies program was used to determine the initial validity of the question. This hypothesis was then evaluated by comparing the replies in each category of the Likert scale to the neutral (median) response value "4." The Sign Test program was used for this evaluation. If the two-tailed p value was less than the alpha level of .10 then the null hypothesis was rejected in favor of the alternative. The Sign Test was used to average and test the individual responses to Questions 15 and 21. The results of this combined opinion on the adequacy of technical training were used for testing demographic factors.

Curriculum Content. The six hypotheses in this subject area related to 42 questions in the survey.

H2: All subjects included in the Supply Operations Officer Course (6421) are not useful to course graduates in performing their duties as supply officers (Questions 3 through 8).

H_o: All subjects included in the SOOC (6421) are not useful to course graduates in performing their duties as supply officers.

H_a: All subjects included in the SOOC (6421) are useful to course graduates in performing their duties as supply officers.

H3: All subjects included in the Supply Operations Officer Course (6421) are given the proper emphasis or proportion of course time (Questions 9 through 14).

H_o: All subjects included in the SOOC (6421) are given the proper emphasis or proportion of course time.

H_a: All subjects included in the SOOC (6421) are not given the proper emphasis or proportion of course time.

Numerical responses to Questions 3 through 8 and 9 through 14 were checked for validity with the Frequencies program and then individually analyzed using the Sign Test. Individual responses of the two groups were then averaged to arrive at each respondent's overall score for usefulness and coverage of the subject areas. A Sign Test was performed on this data to arrive at an overall group opinion of the SOOC (6421) course.

H4: No additional topics should be added to the Supply Operations Officer Course (6421) (Questions 27 through 53).

H_o: No additional topics should be added to the SOOC (6421).

H_a: Additional topics should be added to the SOOC (6421).

Hypothesis H4 was evaluated initially using responses to Question 27. For those surveys with "Yes" responses to Question 27, a Frequencies evaluation and Sign Test was performed on Questions 28 through 53. The results were reported by listing them in order from most desired additions to least desired additions to the SOOC curriculum.

Hypotheses H5, H6, and H7 dealt with the theory and technical content of supply officer training.

H5: The Supply Operations Officer Course (6421) includes too much theory (Question 16).

H_o : The SOOC (6421) includes too much theory.

H_a : The SOOC (6421) includes the proper amount of theory.

H6: Supply officers believe their technical skills are adequate (Question 22).

H_o : Supply officers believe that their technical skills are adequate.

H_a : Supply officers do not believe that their technical skills are adequate.

H7: The Supply Operations Officer Course (6421) includes enough technical information to permit supply officers to adequately fulfill their duties (Question 19).

H_o : The SOOC (6421) includes sufficient technical information to permit supply officers to adequately fulfill their duties.

H_a : The SOOC (6421) does not include sufficient technical information to permit supply officers to adequately fulfill their duties.

Validity of the response was established through examination of the Frequencies program and eligible questions were analyzed using the Sign Test.

Timing of Course Attendance. Hypotheses H8 through H12 were related to six survey questions in the opinion area.

H8: The Supply Operations Officer Course (6421) includes information that is valuable and useful beyond the first two supply assignments (Question 17).

H_o : The SOOC (6421) includes information that is valuable and useful beyond the first two supply assignments.

H_a : The SOOC (6421) includes information that is neither valuable nor useful beyond the first two supply assignments.

H9: Supply officers should attend the Supply Operations Officer Course (6421) before serving in a supply position (Question 18).

H_o: Supply officers should attend the SOOC (6421) before serving in a supply position.

H_a: Supply officers should serve in a supply position before attending the SOOC (6421).

H10: The Supply Systems Management Reports and Listings Course (6424) is not offered at the appropriate time in a supply officer's career (Questions 25 and 26).

H_o: The SSMRLC (6424) is not offered at the appropriate time in a supply officer's career.

H_a: The SSMRLC (6424) is offered at the appropriate time in a supply officer's career.

H11: The Supply Systems Management Reports and Listings Course (6424) provides information that is not useful on the job (Question 24).

H_o: The SSMRLC (6424) does not provide information that is useful on the job.

H_a: The SSMRLC (6424) provides information that is useful on the job.

H12: Supply officers believe that on-the-job experience is better preparation for supply management than formal technical training (Question 20).

H_o: Supply officers believe that on-the-job experience is better preparation for supply management than formal technical training.

H_a: Supply officers believe that formal technical training is better preparation for supply management than on-the-job experience.

Hypotheses H8 through H12 were checked for validity against the Frequencies program and the Sign Test was used to determine respondents' preferences.

Personal Attributes. The remaining ten hypotheses involved comparisons of demographic variables and opinions regarding the adequacy of training (derived from combining responses to Questions 15 and 21). These hypotheses were tested with the Frequencies program followed by the Kruskal-Wallis Test (one-way analysis of variance by ranks).

H13: The year in which supply officers attended the Supply Operations Officer Course (6421) has no effect on their perceptions of training adequacy (Question 2 compared to 15 and 21).

H_o: There is no difference in perception of training from graduates of different year groups.

H_a: There is a difference in the perceptions of training from graduates of different year groups.

H14: The number of assignments between officers' attendance at the Supply Operations Officer Course (6421) and subsequent assignments to base level supply positions has no effect on their perceptions of training adequacy (Question 63 compared to 15 and 21).

H_o: There is no difference in the perceptions of training between graduates who had orders to or were currently assigned to a base supply position and those who did not.

H_a: There is a difference in the perceptions of training between graduates who had orders to or were currently assigned to a base supply position and those who did not.

H15: Supply officers' educational backgrounds have no effect on their perceptions of training adequacy (Questions 57, 64, 65 and 66).

H15a:

H_o: There is no difference in the perception of training from supply officers with different educational levels.

H_a: There is a difference in the perception of training from supply officers with different educational levels.

H15b:

H_o: There is no difference between the perception of training held by supply officers with bachelor's degrees in subjects recommended by AFR 36-1 and those who do not.

H_a: There is a difference between the perception of training held by supply officers with bachelor's degrees in subjects recommended by AFR 36-1 and those who do not.

H15c:

H_o: There is no difference between the perception of training held by supply officers with master's degrees in subjects recommended by AFR 36-1 and those who do not.

H_a: There is a difference between the perception of training held by supply officers with master's degrees in subjects recommended by AFR 36-1 and those who do not.

H15d:

H_o: There is no difference between the perception of training held by supply officers with doctoral degrees in subjects recommended by AFR 36-1 and those who do not.

H_a: There is a difference between the perception of training held by supply officers with doctoral degrees in subjects recommended by AFR 36-1 and those who do not.

H16: Supply officers' sources of commission have no effect on their perceptions of training adequacy (Question 62).

H_o: There is no difference among the perceptions of training held by supply officers from different commissioning sources.

H_a: There is a difference among the perceptions of training held by supply officers from different commissioning sources.

H17: Supply officers' rank has no effect on their perceptions of training adequacy (Question 54).

H_o: There is no difference among the perceptions of training held by supply officers of different ranks.

H_a: There is a difference among the perceptions of training held by supply officers of different ranks.

H18: Supply officers' length of commissioned service has no effect on their perceptions of training adequacy (Question 55).

H_o: There is no difference among the perceptions of training held by supply officers with varying commissioned service time.

H : There is a difference among the perceptions of training
a held by supply officers with varying commissioned service time.

H19: Supply officers' prior enlisted service has no effect on their perceptions of training adequacy (Question 61).

H : There is no difference between the perceptions of training
o held by those supply officers with prior enlisted service and those without.

H : There is a difference between the perceptions of training
a held by those supply officers with prior enlisted service and those without.

H20: The sex of supply officers has no effect on their perceptions of training adequacy (Question 56).

H : There is no difference between the perceptions of training
o held by male and female supply officers.

H : There is a difference between the perceptions of training
a held by male and female supply officers.

H21: The command level of their present assignments has no effect on supply officers' perceptions of training adequacy (Question 67).

H : There is no difference among the perceptions of training
o held by supply officers assigned to different command levels.

H : There is a difference among the perceptions of training
a held by supply officers assigned to different command levels.

H22: Supply officers' years of supply experience have no effect on their perceptions of training adequacy (Questions 61 and 68).

H : There is no difference among the perceptions of training
o adequacy held by supply officers with varying levels of supply experience.

H : There is a difference among the perceptions of training
a adequacy held by supply officers with varying levels of supply experience.

These hypotheses relating demographic variables to perceptions of training adequacy were developed to determine if identifiable subgroups exist in the supply officer corps who would benefit from special training or assignment procedures.

Assumptions

This research design was based on the following assumptions:

1. Surveys were accurately and honestly marked.
2. The group of nonresponders was distributed identically to the responders.
3. The mailing list was accurate.
4. All responses were independent.
5. The survey instrument was valid.

Chapter Summary

This chapter explained how the data for this research project would be collected and analyzed. The reasons for selecting the population of interest, all company grade U.S. Air Force officers with AFSC 64XX, Supply Management Utilization Field, were given. The reasons for selecting a mail survey as the method of data collection were described. The design of the survey instrument was reported as well as the means for distributing the survey instrument and recording data from the returned surveys. After a discussion of hypothesis testing, the three SPSS programs to be used in hypothesis testing were explained: Frequencies, Sign Test, and the Kruskal-Wallis Test. The 22 hypotheses were then listed, followed by the null and alternative versions of each hypotheses and the statistical program to be used in hypothesis testing. The chapter concluded with a statement of the assumptions employed in the research design.

III. Findings and Analysis

Introduction

Seven hundred ninety-eight questionnaires were mailed on 26 April 1984 to all Air Force captains and lieutenants with a primary AFSC of 64XX. Any supply officers serving in a fuels management position were asked not to respond to the questionnaire since the study focused primarily on training for SBSS positions and related duties, not fuels management positions. By 13 June 1984, 485 usable, completed questionnaires had been received for a response rate of 61 percent. The researchers assumed these responses were representative of the entire population and thus comprised the sample for analysis.

Recording the Responses

Building the Data Files. As the completed questionnaires were returned, they were numbered in order of receipt. If a comment sheet was returned, it was given the same code number as the related answer sheet. The comment sheets were stored for later analysis, while the opscan answer sheets were processed in batches of 50 to 100. This processing created raw data files in the AFIT Harris 800 computer. Because the opscan reader recorded response values of zero through nine, while the opscan answer sheets and questionnaires were structured for responses in values of one through ten, a Fortran program was written to recode the raw data files to reflect the original one through ten response values (Appendix G).

Reviewing the Data. After the initial data files were established, page nine of the questionnaire (reverse side of the comment sheet) was

examined to determine if any of the responses marked "Other" could be reclassified into one of the given categories. For example, if Question 64 (area of bachelor's degree) was marked "10 Other - Education" then this response was recoded in the data files to "7 Liberal Arts." For Question 64, "Other" responses with education, physical education, criminal justice, psychology, social sciences, or political science written in the blank provided were recoded as "7 Liberal Arts." "Other" responses with economics, resource management, personnel management, computer science, or agricultural economics written in the blank were recoded as "6 Business Administration." For Question 65 (area of master's degree) "Other" responses with systems management written in were recoded as "2 Business Administration." "Other" responses explained as criminal justice, psychology, sociology, or human relations were recoded as "8 Liberal Arts." Under Question 67 (command level of present assignment), "Other" responses marked intermediate command were recoded as "2 Major Command" and those with group written in were recoded as "3 Wing/Base."

Summary of Demographic Data

The SPSS program Frequencies was used initially to summarize the responses to all questions (Appendices H and I). Demographic data was then drawn from this program.

Basic Information. The respondents' ranks were summarized as follows: second lieutenants - 18.4%; first lieutenants - 18.6%; captains - 61%; and majors - 1.2%. Three-quarters of the respondents were male. Forty-eight percent of the respondents had no prior enlisted service. Fifty-seven percent of the respondents were graduates of Officer Training School. For a complete accounting of the demographic data collected, see Appendix H.

Education. Forty-seven percent of the respondents had undergraduate degrees in business and accounting, while 34% had undergraduate degrees in the liberal arts. Forty-three percent had master's degrees: 58% in management, economics, or business, and 20% in logistics.

Training. Eighty-seven percent of respondents had attended the Supply Operations Officer Course (SOOC), 37% before 1979 and 63% since that year. Thirty percent of the respondents had attended the Supply Systems Management Reports and Listings Course (SSMRLC).

Supply Experience. Ninety-nine percent of respondents held a primary AFSC of 64XX, while 93% had a duty AFSC of 64XX. Seventy percent of respondents attended the Supply Operations Officer Course immediately before or during their assignment to a base supply position. Eighty-seven percent had been assigned to the Supply Management Utilization Field (64XX) since commissioning. Twenty-four percent of respondents had more than ten years of supply experience, if both enlisted and commissioned service were counted. Nine percent of respondents had never been assigned to a base supply position. Sixty-five percent were assigned at the time of the survey to squadron, wing, or base-level positions.

Hypothesis Testing

Primary Hypothesis. The SPSS program Sign Test was used to evaluate the responses to Questions 15 and 21 in order to test the primary hypothesis. Both questions were analyzed individually and then combined for analysis. In all three cases, the null hypothesis was rejected because the alpha level divided by two ($.10/2 = .05$) was greater than the two-tailed p value. Therefore, the alternate hypothesis was accepted. In other words, the supply

officers responding to the questionnaire believed their initial formal technical training did not adequately prepare them for duty as supply officers.

H₁: USAF supply officers perceive that the Supply Operations Officer Course (6421) adequately prepares them to fulfill their assigned duties (Questions 15 and 21).

H₀: The SOOC (6421) adequately prepares USAF supply officers to fulfill their assigned duties.

H_a: The SOOC (6421) does not adequately prepare USAF supply officers to fulfill their assigned duties.

Question 15: The Supply Operations Officer Course (6421) does an adequate job in preparing entry level Supply Officers.

Results: 420 valid responses;

Disagree: 241
Agree: 141
Neutral: 38
Z = 5.665, Two-Tailed P = 0.000.

Decision: Reject H₀.

Question 21: Overall, I am satisfied with the degree, depth, and scope of the supply training I have received so far.

Results: 480 valid responses;

Disagree: 240
Agree: 175
Neutral: 65
Z = 3.142, Two-Tailed P = 0.002.

Decision: Reject H₀.

Questions 15 and 21: (combined)

Results: 485 valid responses;

Disagree: 264
Agree: 166
Neutral: 55
Z = 4.678, Two-Tailed P = 0.000.

Decision: Reject H₀.

Curriculum Content. The Sign Test program was also used to evaluate the responses to the questions in support of Hypotheses H2 through H12. Testing of Questions 3 through 7, using the same decision rule as above, indicated that in each case the null hypothesis must be rejected and the alternative accepted. This means the respondents felt the topics of Wholesale/Retail Supply Operations, Materiel Support Procedures, Materiel Management, Customer Support and Storage, and Supply Systems/Management presented in the SOOC were useful to them. However, the null hypothesis related to Question 8 could not be rejected, indicating the usefulness of Special Subjects in the SOOC curriculum was not proven.

H2: All subjects included in the Supply Operations Officer Course (6421) are not useful to course graduates in performing their duties as supply officers (Question 3 through 8).

H_0 : All subjects included in the SOOC (6421) are not useful to course graduates in performing their duties as supply officers.

H_a : All subjects included in the SOOC (6421) are useful to course graduates in performing their duties as supply officers.

Question 3: Wholesale/Retail Supply Operations.

Results: 420 valid responses;

Useful: 252
Neutral: 74
Useless: 94
 $Z = 8.440$, Two-Tailed $P = 0.000$.

Decision: Reject H_0 .

Question 4: Materiel Support Procedures.

Results: 419 valid responses;

Useful: 288
Neutral: 50
Useless: 81
 $Z = 10.724$, Two-Tailed $P = 0.000$.

Decision: Reject H_0 .

Question 5: Materiel Management.

Results: 421 valid responses;

Useful: 249
Neutral: 59
Useless: 113
 $Z = 7.095$, Two-Tailed $P = 0.000$.

Decision: Reject H_0 .

Question 6: Customer Support and Storage.

Results: 420 valid responses;

Useful: 265
Neutral: 58
Useless: 97
 $Z = 8.777$, Two-Tailed $P = 0.000$.

Decision: Reject H_0 .

Question 7: Supply Systems/Management.

Results: 419 valid responses;

Useful: 226
Neutral: 73
Useless: 120
 $Z = 5.645$, Two-Tailed $P = 0.000$.

Decision: Reject H_0 .

Question 8: Special Subjects.

Results: 420 valid responses;

Useful: 170
Neutral: 81
Useless: 169
 $Z = 0.000$, Two-Tailed $P = 1.000$.

Decision: Do not reject H_0 .

Questions 3 through 8: (combined).

Results: 485 valid responses;

Useful: 270
Neutral: 87
Useless: 128
 $Z = 7.068$, Two-Tailed $P = 0.000$.

Decision: Reject H_0 .

Therefore, testing each question individually as well as testing the combined responses confirms the usefulness of the basic curriculum.

Hypothesis H3 focused on the amount of time devoted to each topic in the SOOC. Respondents were asked to indicate in Questions 9 through 14 whether each topic presented needed more or less course time allotted to it. Questions 9, 12, 13 and 14 could not be evaluated since more than 25 percent of the respondents reported a neutral position. Testing of the remaining questions yielded the conclusion that since the null hypothesis had to be rejected, the general belief was that the topics of Materiel Support Procedures and Materiel Management did not receive the proper proportion of course time.

H3: All subjects included in the Supply Operations Officer Course (6421) are given the proper emphasis or proportion of course time (Questions 9 through 14).

H_0 : All subjects included in the SOOC (6421) are given the proper emphasis or proportion of course time.

H_a : All subjects included in the SOOC (6421) are not given the proper emphasis or proportion of course time.

Question 9: Wholesale/Retail Supply Operations.

Results: 415 valid responses;

Needed Less: 87

Neutral: 124

Needed More: 204

$Z = 6.800$, Two-Tailed $P = 0.000$.

Decision: Inconclusive.

Question 10: Materiel Support Procedures.

Results: 417 valid responses;

Needed Less: 58

Neutral: 92

Needed More: 267

$Z = 11.538$, Two-Tailed $P = 0.000$.

Decision: Reject H_0 .

Question 11: Materiel Management.

Results: 416 valid responses;

Needed Less: 50

Neutral: 88

Needed More: 278

$Z = 12.534$, Two-Tailed $P = 0.000$.

Decision: Reject H_0 .

Question 12: Customer Support and Storage.

Results: 415 valid responses;

Needed Less: 56

Neutral: 120

Needed More: 239

$Z = 10.596$, Two-Tailed $P = 0.000$.

Decision: Inconclusive.

Question 13: Supply Systems/Management.

Results: 417 valid responses;

Needed Less: 72
Neutral: 118
Needed More: 227
 $Z = 8.906$, Two-Tailed $P = 0.000$.

Decision: Inconclusive.

Question 14: Special Subjects.

Results: 416 valid responses;

Needed Less: 107
Neutral: 113
Needed More: 196
 $Z = 5.055$, Two-Tailed $P = 0.000$.

Decision: Inconclusive.

Questions 9 through 14: (combined).

Results: 485 valid responses;

Needed Less: 63
Neutral: 107
Needed More: 315
 $Z = 12.910$, Two-Tailed $P = 0.000$.

Decision: Reject H_0 .

Evaluation of Hypothesis H4 indicated that the majority of respondents felt topics should be added to the SOOC. Respondents were asked to indicate the usefulness or uselessness of suggested additional topics listed in Questions 27 through 52 (principally derived from the SSMRLC syllabus). The Sign Test was used to rank the responses. The five topics receiving the highest ratings were, in order of preference: requisition procedures and management products, an in-depth look at the maintenance-supply interface, explanation and use of SBSS management products, analysis of the M32 report, and analysis of selected inquiries. For a complete listing of the suggested additional topics in order of preference, see Table I. Ninety

TABLE I

Preference Ranking of Proposed Additional Topics
to the Supply Operations Officer Course

<u>Rank</u>	<u>Survey Question Number</u>	<u>Topic</u>
1	48	Requisition procedures and management products
2	36	In-depth look at the Maintenance-Supply interface
3	43	Explanation and use of SBSS management products
4	52	Analysis of the M32 report
5	50	Analysis of selected inquiries
6	45	Repair cycle management procedures and products
7	44	Demand processing procedures and issuing systems
8	51	Analysis of selected transaction/document registers
9	46	Bench stock management procedures and products
10	30	Analysis of allowance and authorization management procedures and products
11	41	Delinquent document and reject control procedures
12	31	Analysis of requirements determination procedures
13	32	Principles of the Air Force Stock Fund
14	29	Expanded coverage of the computer's role in base supply
15	49	Analysis of stock fund management products
16	37	Expanded coverage of the supply role in mobility
17	47	Retail outlet management procedures
18	42	Inventory procedures
19	34	Mini-computer, micro-computer role in supply
20	28	Coverage of the remainder of Air Force Manual 67-1, (Volumes I thru IV)
21	40	Internal records maintenance and procedures (Records Maintenance)
22	38	SBSS Organization Structure
23	39	An explanation of computer scheduling process and listing
24	33	WPM Management above the base level
25	35	An explanation of Equipment Management above the base level

individuals indicated a desire for additional topics not listed (Question 53).

These additional write-in topics are summarized at the end of this chapter.

H4: No additional topics should be added to the Supply Operations Officer Course (6421) (Questions 27 through 53).

H_0 : No additional topics should be added to the SOOC (6421).

H_a : Additional topics should be added to the SOOC (6421).

Question 27: Do you think anything should be added to the Supply Operations Officer Course (6421)?

Results: 485 valid responses;

Yes:	328
No:	67
Unfamiliar:	63
No response:	27.

Question 53: I would like to see other subjects added but they are not listed in items 29 through 53.

Results: 485 valid responses;

Yes:	90
No:	256
No response:	139.

Hypothesis H5 concerned the amount of theory presented in the SOOC.

It was not possible to draw any conclusions from the responses to Question 16 since more than 25 percent of the responses were neutral.

H5: The Supply Operations Officer Course (6421) includes too much theory (Question 16).

H_0 : The SOOC (6421) includes too much theory.

H_a : The SOOC (6421) includes the proper amount of theory.

Question 16: Basic Supply Operations Officer Course teaches too much theory.

Results: 418 valid responses;

Agree: 121
Neutral: 130
Disagree: 167
 $Z = 2.652$, Two-Tailed $P = 0.008$.

Decision: Inconclusive.

Hypotheses H6 and H7 dealt with the technical skills of supply officers and the technical content of the SOOC. Testing indicated that the null hypothesis must be rejected in each case, leading to the conclusion that the respondents felt their technical skills were inadequate and the SOOC did not contain enough of the necessary technical information.

H6: Supply officers believe their technical skills are adequate (Question 22).

H_o : Supply officers believe that their technical skills are adequate.

H_a : Supply officers do not believe that their technical skills are adequate.

Question 22: If I have any weaknesses, they are primarily in technical knowledge.

Results: 484 valid responses;

Agree: 324
Neutral: 53
Disagree: 107
 $Z = 10.404$, Two-Tailed $P = 0.000$.

Decision: Reject H_o .

H7: The Supply Operations Officer Course (6421) includes enough technical information to permit supply officers to adequately fulfill their duties (Question 19).

H₀: The SOOC (6421) includes sufficient technical information to permit supply officers to adequately fulfill their duties.

H_a: The SOOC (6421) does not include sufficient technical information to permit supply officers to adequately fulfill their duties.

Question 19: The course content of the Supply Operations Officer Course does not present enough technical knowledge to cope with the complexities of modern supply.

Results: 419 valid responses;

Agree: 249
Neutral: 52
Disagree: 118
 $Z = 6.786$, Two-Tailed $P = 0.000$.

Decision: Reject H₀.

Timing of Course Attendance. Hypothesis H8 was designed to evaluate the usefulness of the 6421 course after the first two supply assignments. Since more than 25 percent of the respondents indicated a neutral position, no conclusions could be drawn.

H8: The Supply Operations Officer Course (6421) includes information that is valuable and useful beyond the first two supply assignments (Question 17).

H₀: The SOOC (6421) includes information that is valuable and useful beyond the first two supply assignments.

H_a: The SOOC (6421) includes information that is neither valuable nor useful beyond the first two supply assignments.

Question 17: Basic Supply Operations Officer Course training has little relevance beyond the first two assignments.

Results: 418 valid responses;

Agree: 141
Neutral: 118
Disagree: 159
 $Z = 0.981$, Two-Tailed $P = 0.326$.

Decision: Inconclusive.

Hypothesis H9 was related to the timing of attendance at initial technical training. Results of testing indicated respondents believed new supply officers should be sent to their permanent duty assignments to become acclimated to the SBSS before attending the SOOC.

H9: Supply officers should attend the Supply Operations Officer Course (6421) before serving in a supply position (Question 18).

H₀: Supply officers should attend the SOOC (6421) before serving in a supply position.

H_a: Supply officers should serve in a supply position before attending the SOOC (6421).

Question 18: Personnel scheduled to attend the basic supply course should first be sent directly to their unit/command of assignment to gain some practical experience and perspective.

Results: 421 valid responses;

Agree:	305
Neutral:	20
Disagree:	96
$Z = 10.387$, Two-Tailed $P = 0.000$.	

Decision: Reject H₀.

Hypothesis H10 concerned the timing of attendance at the SSMRLC. Since testing indicated rejection of the null hypothesis, it was concluded the SSMRLC was offered at the appropriate time for those respondents (152) who were graduates. Based on the positive response to Question 25, Question 26 was not evaluated (I would have preferred that the Systems Management Reports and Listings course be given at an earlier point because that information could have been used in day-to-day business).

H10: The Supply Systems Management Reports and Listings Course (6424) is not offered at the appropriate time in a supply officer's career (Questions 25 and 26).

H₀: The SSMRLC (6424) is not offered at the appropriate time in a supply officer's career.

H_a: The SSMRLC (6424) is offered at the appropriate time in a supply officer's career.

Question 25: The Systems Management Reports and Listings Course was given at the appropriate time in my career because the information would not have been useful without that extra "time in the field."

Results: 132 valid responses;

Agree: 88
Neutral: 20
Disagree: 44
Z = 3.743, Two-Tailed P = 0.000.

Decision: Reject H₀.

Hypothesis H11 pertained to the content of the SSMRLC. Since the decision after testing was to reject the null hypothesis, the conclusion supported the usefulness of the information presented in the SSMRLC.

H11: The Supply Systems Management Reports and Listings Course (6424) provides information that is not useful on the job.

H₀: The SSMRLC (6424) does not provide information that is useful on the job.

H_a: The SSMRLC (6424) provides information that is useful on the job.

Question 24: The information provided by the Supply Systems Management Reports and Listings Course is helpful to me on the job.

Results: 161 valid responses;

Agree: 126
Neutral: 16
Disagree: 19
Z = 8.803, Two-Tailed P = 0.000.

Decision: Reject H₀.

Hypothesis H12 was designed to evaluate the relative value of formal technical training and OJT. However, since testing showed the null hypothesis could not be rejected, it is possible to state only that there is no evidence that OJT is better preparation for supply duties than formal technical training.

H12: Supply officers believe that on-the-job experience is better preparation for supply management than formal technical training (Question 20).

H_0 : Supply officers believe that on-the-job experience is better preparation for supply management than formal technical training.

H_a : Supply officers believe that formal technical training is better preparation for supply management than on-the-job experience.

Question 20: The best way to develop the skills and knowledge necessary for a position in supply management is through on-the-job training (OJT) as opposed to formal technical training.

Results: 485 valid responses;

Agree:	220
Neutral:	67
Disagree:	198
$Z = 1.027$, Two-Tailed $P = 0.304$.	

Decision: Do not reject H_0 .

Personal Attributes. The data in support of Hypothesis H13 through H22 were initially reviewed with the SPSS Frequencies program. The SPSS Kruskal-Wallis program was then used for hypothesis testing. To test each hypothesis, demographic data was evaluated against the combined responses to Questions 15 and 21 to determine if any population subgroup had differing perceptions of the adequacy of supply officer training (see Primary Hypothesis).

Testing of Hypothesis H13 indicated that there was a difference in the perceptions of training by SOOC graduates from different years. The SOOC graduates were divided into two groups for testing purposes: those attending the SOOC before 1981 and those attending in 1981 and after. The mean ranks statistic provided by the Kruskal-Wallis Test was greater for the 1981 and later graduates, thus indicating this group of graduates were less satisfied with their training. A higher rating on the answer scale provided showed stronger disagreement with the statements in Questions 15 and 21. When using the Kruskal-Wallis Test the null hypothesis is rejected if the alpha level (.10) is greater than the significance level.

H13: The year in which supply officers attended the Supply Operations Officer Course (6421) has no effect on their perceptions of training adequacy (Question 2 compared to 15 and 21).

H₀: There is no difference in the perception of training from graduates of different year groups.

H_a: There is a difference in the perception of training from graduates of different year groups.

Question 2: In what calendar year did you attend the basic Supply Operations Officer Course?

Question 15: The basic Supply Operations Officer Course (6421) does an adequate job in preparing entry level supply officers.

Question 21: Overall, I am satisfied with the degree, depth, and scope of the supply training I have received so far.

Results: Chi-Square = 10.066;
Significance = 0.002.

Decision: Reject H₀.

Hypothesis H14 was designed to relate the timing of attendance and assignment to base supply positions to perceptions of training adequacy. Because the alpha level was less than the significance level, the null hypothesis could not be rejected. This result meant there was no evidence to support a belief in differing perceptions of training adequacy.

H14: The number of assignments between officers' attendance at the Supply Operations Officer Course (6421) and subsequent assignments to base level supply positions has no effect on their perceptions of training adequacy (Question 63 compared to 15 and 21).

H₀: There is no difference in the perceptions of training between graduates who had orders to or were currently assigned to a base supply position and those who did not.

H_a: There is a difference in the perceptions of training between graduates who had orders to or were currently assigned to a base supply position and those who did not.

Question 63: I was assigned or had orders to a base supply position (when I attended the basic supply course, on my next assignment, two assignments after attendance, etc.).

Results: Chi-Square = 0.185;
Significance = 0.667.

Decision: Do not reject H₀.

Hypothesis H15 was designed to test the effect of supply officers' educational backgrounds on their perceptions of technical training adequacy. For Hypothesis H15a, the Kruskal-Wallis Test was used to evaluate two groups of officers: those with bachelor's degrees and those with higher degrees. Since the alpha level was greater than the significance level, the null hypothesis was rejected. This indicated a difference in perception

of training adequacy. Those with bachelor's degrees only had a higher mean ranks statistic, showing a stronger overall disagreement with the statement that training was adequate.

H15: Supply officers' educational backgrounds have no effect on their perceptions of training adequacy (Questions 57, 64, 65 and 66).

H15a:

H_0 : There is no difference in the perception of training from supply officers with different educational levels.

H_a : There is a difference in the perception of training from supply officers with different educational levels.

Question 57: What is your highest education level?

Results: Chi-Square = 6.512;
Significance = 0.011.

Decision: Reject H_0 .

For Hypotheses H15b and H15c, the respondents were divided into two categories: those officers with degrees in subject areas recommended by AFR 36-1 (see Appendix A) and those with degrees in other subject areas. For both bachelor's and master's degrees, the alpha levels were less than the significance levels, so the null hypotheses could not be rejected. Therefore, no evidence indicated the type of degree affected perceptions of training adequacy.

H15b:

H_0 : There is no difference between the perception of training held by supply officers with bachelor's degrees in subjects recommended by AFR 36-1 and those who do not.

H_a : There is a difference between the perception of training held by supply officers with bachelor's degrees in subjects recommended by AFR 36-1 and those who do not.

Question 64: What area is your bachelor's degree in?

Results: Chi-Square = 0.104;
Significance = 0.747.

Decision: Do not reject H₀.

H15c:

H₀ : There is no difference between the perception of training held by supply officers with master's degrees in subjects recommended by AFR 36-1 and those who do not.

H_a : There is a difference between the perception of training held by supply officers with master's degrees in subjects recommended by AFR 36-1 and those who do not.

Question 65: What area is your master's degree in?

Results: Chi-Square = 1.594;
Significance = 0.207.

Decision: Do not reject H₀.

Since only two respondents reported the possession of doctoral degrees, Hypothesis H15d could not be evaluated.

H15d:

H₀ : There is no difference between the perception of training held by supply officers with doctoral degrees in subjects recommended by AFR 36-1 and those who do not.

H_a : There is a difference between the perception of training held by supply officers with doctoral degrees in subjects recommended by AFR 36-1 and those who do not.

Question 66: What area is your doctoral degree in?

To test Hypothesis H16, the respondents were classified as graduates of Officer Training School and graduates of other commissioning sources (Reserve Officers' Training Corps and four service academy graduates). Since the Kruskal-Wallis Test yielded a significance level greater than the alpha level, there was no reason to reject the null hypothesis. In other words, there was no basis for asserting that the commissioning source affected perceptions of training adequacy.

H16: Supply officers' sources of commission have no effect on their perceptions of training adequacy (Question 62).

H_0 : There is no difference among the perceptions of training held by supply officers from different commissioning sources.

H_a : There is a difference among the perceptions of training held by supply officers from different commissioning sources.

Question 62: What was the source of your commission?

Results: Chi-Square = 0.441;
Significance = 0.507.

Decision: Do not reject H_0 .

Hypotheses H17 and H18 dealt with the effect of rank and commissioned service time on perceptions of training adequacy. The groups tested were lieutenants and captains for H17 and those officers with less than four years' service and those with more than four years' service for H18. Both tests indicated that the null hypothesis had to be rejected since the alpha levels were greater than the significance levels. Therefore, rank and commissioned service time did have an effect on perceptions of training adequacy. Lieutenants and officers with less than four years' commissioned

service had higher mean ranks statistics, showing these groups displayed stronger disagreement with the statement that training was adequate.

H17: Supply officers' rank has no effect on their perceptions of training adequacy (Question 54).

H_o : There is no difference among the perceptions of training held by supply officers of different ranks.

H_a : There is a difference among the perceptions of training held by supply officers of different ranks.

Question 54: What is your current grade?

Results: Chi-Square = 9.241;
Significance = 0.002.

Decision: Reject H_o .

H18: Supply officers' length of commissioned service has no effect on their perceptions of training adequacy (Question 55).

H_o : There is no difference among the perceptions of training held by supply officers with varying commissioned service time.

H_a : There is a difference among the perceptions of training held by supply officers with varying commissioned service time.

Question 55: How many years of active commissioned service do you have?

Results: Chi-Square = 9.788;
Significance = 0.002.

Decision: Reject H_o .

Testing of Hypothesis H19 showed there was no support for the concept that officers with prior enlisted service had different perceptions of

training adequacy than those who had no prior service. Since the alpha level was less than the significance level, the null hypothesis could not be rejected.

H19: Supply officers' prior enlisted service has no effect on their perceptions of training adequacy (Question 60).

H_o : There is no difference between the perceptions of training held by those supply officers with prior enlisted service and those without.

H_a : There is a difference between the perceptions of training held by those supply officers with prior enlisted service and those without.

Question 60: How many years of prior enlisted service do you have?

Results: Chi-Square = 2.151;
Significance = 0.142.

Decision: Do not reject H_o .

Evaluation of Hypothesis H20 indicated there was a difference in the male and female perceptions of training. Since the mean ranks statistic for females was higher than that for males, it meant the females disagreed more strongly with the statement that training was adequate.

H20: The sex of supply officers has no effect on their perceptions of training adequacy (Question 56).

H_o : There is no difference between the perceptions of training held by male and female supply officers.

H_a : There is a difference between the perceptions of training held by male and female supply officers.

Question 56: What is your sex?

Results: Chi-Square = 8.347;
Significance = 0.004.

Decision: Reject H_o .

To test Hypothesis H21, respondents were divided into two groups: those assigned to the squadron, wing, or base level, and all others. Since the significance level was greater than the alpha level, there was no basis to reject the hypothesis that command level of present assignment had no effect on perceptions of training adequacy.

H21: The command level of their present assignments has no effect on supply officers' perceptions of training adequacy (Question 67).

H_0 : There is no difference among the perceptions of training held by supply officers assigned to different command levels.

H_a : There is a difference among the perceptions of training held by supply officers assigned to different command levels.

Question 67: What command level are you presently assigned to?

Results: Chi-Square = 2.131;
Significance = 0.144.

Decision: Do not reject H_0 .

Respondents were separated into two categories to test Hypothesis H22: those with less than four years of total military supply experience and those with more than four years of supply experience. The decision to reject the null hypothesis meant that years of supply experience did have an effect on perceptions of training. Those officers with less than four years of experience had a higher mean ranks statistic, indicating they disagreed more strongly with the statement that training was adequate.

H22: Supply officers' years of supply experience have no effect on their perceptions of training adequacy (Questions 61 and 68).

H₀ : There is no difference among the perceptions of training adequacy held by supply officers with varying levels of supply experience.

H_a : There is a difference among the perceptions of training adequacy held by supply officers with varying levels of supply experience.

Question 61: Considering your total military service, how many years of supply experience do you have?

Results: Chi-Square = 6.048;
Significance 0.014.

Decision: Reject H₀.

Summary of Comment Sheets

Respondents were invited to suggest topics for addition to the SOOC or to make any other comments on the last page of the survey instrument. The comment sheets were returned with the opscan answer sheets. The 212 respondents making comments clearly felt most strongly about one subject: new supply officers should be sent to their permanent duty assignments for some familiarization and on-the-job training before attending the SOOC. That comment appeared forty-seven times. The comment sheets were reviewed and comments which appeared eight or more times are summarized below. The frequency of the comments is given in the parentheses following the comment.

General Remarks. In terms of general remarks on training, respondents said that training for supply officers needed improvement (23), the SOOC was too short (19), the SOOC was not detailed enough (17), graduates of the SOOC were not adequately prepared to fulfill their duties or lacked competency (9), the SOOC was confusing (9), and the quality of instructors for the SOOC was poor (9). Other comments included a request for an SBSS

"refresher" or update course (13), and suggestions for more technically-oriented training (10), training officers for their specific assignments (8), and a formal on-the-job training period of apprenticeship and rotation among all the branches of base supply for new supply officers (8).

Additions to the SOOC. Suggested additions to the SOOC curriculum included more analysis of computer listings (11), emphasis on the interface between maintenance and supply (10), explanation of how the branches of base supply interrelate (10), explanation of how the SBSS relates with AFLC, the Air Staff, Department of Defense, General Services Administration and the supply organizations of other military services (10), mobility planning and wartime operations (9), lessons on the combat-oriented supply organization (8), emphasis on customer relations and customer support (8), and a discussion of possible supply assignments and career progression for supply officers (8).

Summary of Data Analysis

Statistical Tests. Results of the statistical tests, employing an alpha level of .10, indicated the null hypotheses (H_0) corresponding to Hypotheses H1 through H7, H9, H10, H11, H13, H15a, H17, H18, H20, and H22 should be rejected. Rejection of the null hypothesis in favor of the alternative hypothesis indicated the research findings supported the following observations. In all cases the term "supply officers" refers to the group surveyed, company grade U.S. Air Force officers with a PAFSC in the Supply Management Utilization Field (64XX).

In terms of initial technical training, the research findings supported the perceptions that the SOOC did not adequately prepare them to fulfill

their duties (H1); SOOC graduates found the course curriculum useful in performing their duties (H2); the proportion of time allotted to two major subject areas in the SOOC needed adjustment (H3); additional topics should be added to the SOOC (H4); supply officers perceived their technical knowledge as inadequate (H6); and the SOOC did not present enough technical knowledge (H7).

In reference to timing of course attendance and the SSMRLC, the research supported the hypothesis that new supply officers should be sent to their duty stations first for familiarization with base supply operations before attending the SOOC (H9); the SSMRLC was offered at the appropriate point in a supply officer's career (H10); and the SSMRLC provided information useful on the job (H11).

The hypotheses supported by the research related to personal attributes showed several different subgroups of the population under study held different perceptions of the adequacy of initial technical training. Hypothesis testing using the SPSS Kruskal-Wallis program showed officers who had completed the SOOC in 1981 or later years were less satisfied with their technical training than those officers completing their training in earlier years (H13). Those officers possessing only bachelor's degrees were less satisfied with their technical training than those officers with advanced degrees (H15a). Lieutenants were less satisfied with their technical training (H17), as were those officers with less than four years of commissioned service (H18). The statistical tests also showed females were less satisfied with their technical training (H20), as were those officers with less than four years of total military supply experience (H22).

Comment Sheets. Respondents were invited to suggest topics to be added to the SOOC (Question 53) or to make any other relevant comments (page 10 of the survey instrument). The most frequently-appearing comment (47 times) concerned the need for new supply officers to acquire some familiarization with the SBSS at their permanent duty stations before attending initial technical training. Several other trends clearly discernible in the summarization of the comment sheets included suggestions for improvement of the SOOC, an SBSS "refresher" course, increased interest in proper use of SBSS management products and data listings, and emphasis on the maintenance-supply interface and relationships with other customers and sources of supply.

IV. Summary, Recommendations, and Conclusion

Overview

As the level of weapons technology rises, so does the need for sophisticated logistics systems. Availability of critical components is the core of military readiness. All military supply managers must face the challenge of supporting an increasingly complex mission with shrinking resources. The Air Force trains its supply officers to meet this challenge through a combination of formal technical training and on-the-job experience. While technical training may be waived in specific cases, the majority of Air Force officers who serve in the Supply Management Utilization Field (AFSC 64XX) are sent to Lowry Technical Training Center, Colorado, for initial and advanced technical training.

Junior officers new to the supply career field attend the Supply Operations Officer Course (SOOC). It is designed to teach officers how to manage the Standard Base Supply System (SBSS). Those officers with working experience in the SBSS may attend the Supply Systems Management Reports and Listings Course (SSMRLC) to improve their use of the management products generated by the SBSS. Captains and higher-ranking officers with extensive SBSS experience may attend the Supply Management Staff Officer Course (6416).

Initial technical training is extremely critical in the supply career field, as in all other career fields that rely heavily on complex management information systems, since a new supply officer may immediately be put in charge of a branch of a base supply organization. This research project was designed to determine if junior supply officers found their

initial technical training adequate. This project was also designed to determine how the SOOC could be improved to make it more useful to supply officers working in the SBSS.

Summary of Methodology

To determine if initial supply officer training needed improvement and how those improvements might be made, the researchers elected to survey all Air Force company grade supply officers. This group was approximately equal to the group of officers who had completed the Supply Operations Officer Course (SOOC) conducted by the Lowry Technical Training Center within the last ten years. A survey instrument was designed to collect the perceptions of the officers surveyed regarding the usefulness and adequacy of coverage of the major topics presented in the SOOC. The survey instrument also included questions on the usefulness of the Supply Systems Management Reports and Listings Course (SSMRLC). The survey asked the officers to indicate whether or not additional topics should be added to the SOOC. If the respondents thought topics should be added, they were also asked to indicate the usefulness of a suggested list of topics and to write in any potential topics not listed. The survey concluded with requests for demographic information such as rank, sex, education level, type of degree, length of prior enlisted service, source of commission, and so on.

The surveys and opscan answer sheets were mailed to 798 Air Force company grade officers with a primary AFSC in the Supply Management Utilization Field (64XX). Sixty-one percent of the surveys were returned. Two hundred and twelve comment sheets were returned with suggestions for improving supply officer training. Data from the returned surveys were read into

AFIT's Harris 800 computer to build the initial data files. This raw data was then summarized using the SPSS Frequencies program.

Twenty-two hypotheses were developed to test assumptions concerning the adequacy of the SOOC, additional topics for the SOOC, timing of attendance at the SOOC and the SSMRLC, and possible relationships between training perceptions and various subgroups of company grade supply officers. Hypothesis testing was conducted using SPSS programs. The Sign Test program was used to evaluate Hypotheses H1 through H12, while the Kruskal-Wallis program was used to evaluate Hypotheses H13 through H22. Any remarks returned on the comment sheets were grouped into similar categories and summarized.

Summary of Findings

Hypothesis testing was conducted by comparing a statistic calculated from the data for each hypothesis against a test statistic, using an established decision rule to determine whether or not the null hypothesis could be rejected. In the cases where the null hypothesis could not be rejected, there was no basis to prove or disprove the null hypothesis. However, where the null hypothesis was rejected, there was statistical evidence to accept the alternative hypothesis. The decision to reject the null hypothesis, therefore, provided more information and made definitive observations possible.

Changes to the SOOC. Applying the Sign-Test to the data collected and reviewing the comment sheets showed the SOOC needed revision. Respondents communicated dissatisfaction with their initial technical training, technical skills, and the amount of technical information presented in the SOOC. While the respondents confirmed the usefulness of the major course

topics (Wholesale/Retail Supply Operations, Materiel Support Procedures, Materiel Management, Customer Support and Storage, and Supply Systems/Management), they also indicated the need for changes to the proportion of course time allotted to two major topics. The majority of respondents wanted more course time allotted to Materiel Support Procedures and Materiel Management. The majority of respondents also wanted additional topics added to the SOOC. Additional topics listed on the survey instrument receiving the highest "usefulness" ratings pertained to requisition procedures, the maintenance-supply interface, and analysis and use of computer-generated management products. These observations were echoed in the comment sheets. There were 86 remarks calling for various improvements to the SOOC. Suggested additions to the SOOC curriculum included more analysis of computer listings, emphasis on the maintenance-supply interface and the importance of customer support, discussion of combat and mobility planning, and explanation of how the SBSS relates to DOD wholesale agencies.

OJT and Formal Technical Training. Respondents showed strong belief in the importance of both on-the-job training (OJT) and formal technical training. This strong belief was manifested in both the responses to Question 18 and remarks on the comment sheets. Three-fourths of the respondents agreed that personnel should be sent to their permanent duty stations for familiarization and practical experience before being sent to the SOOC (Question 18). This sentiment was echoed on the comment sheets 17 times, appearing twice as frequently as any other single comment.

Eight officers suggested through the comment sheets a formal apprenticeship period of training and rotation among all the branches of base supply for new supply officers.

Advanced Courses. Hypothesis testing revealed the perception the Supply Systems Management Reports and Listings Course (SSMRLC) provided information useful on the job and was given at the appropriate point in the supply officer's career (usually 18 to 24 months after completion of the SOOC). However, only 146 respondents (of 430 answering Question 23 concerning course attendance) had attended the SSMRLC.

A review of the comment sheets showed 13 requests for an SBSS update or "refresher" course especially for those supply officers assigned away from an SBSS position for several years.

Perceived Needs for Better Training. Hypothesis testing identified several subgroups of officers who disagreed more strongly than the others with the adequacy of their supply training (Questions 15 and 21). These subgroups were 1981 and later graduates of the SOOC, officers with bachelor's degrees only, lieutenants, those with less than four years of total military supply experience, and females. With the exception of the female supply officers, these subgroups appear to be composed of the same individuals: those with less than four years' working experience as Air Force supply officers. Possibly, their on-the-job experience was not yet sufficient to fill in the gaps left by formal technical training, as was likely the case for more senior, experienced officers. In other words, captains had acquired enough knowledge through practical experience to supplement what they learned, or did not learn, in formal technical training. The lieutenants, with less practical experience, felt inadequately prepared to meet the demands of the job.

Recommendations for Management Action

The following recommendations were scheduled to be presented by the authors to staff officers from HQ USAF/LEYS and HQ ATC/TTQC during the Supply Officer Training Workshop held at Lowry Air Force Base, Colorado, from 27 to 31 August 1984.

Timing of Attendance at SOOC. To provide a frame of reference for new supply officers and to make formal technical training as beneficial as possible, new supply officers should be sent to their permanent duty stations for three to six months of familiarization and OJT before attending the SOOC. While fully aware of the budget implications and the reluctance of base level supply officials to "lose" manpower while the new supply officers attend the SOOC on a temporary duty basis, the authors make this recommendation most strongly. Without some actual experience of the SBSS, the SOOC loses much of its utility.

I feel that the "Basic Supply Officers' Course" should not come until you've been in the field for several months. Although you'll be lost, as I was, when you are first assigned, if you ask a lot of questions and can view procedures as done at the working level, when you get to Supply School, you can see the "whole picture" much easier. It's been a while since I was at tech school, but I can remember understanding how the squadron branches fit together much better than many of my contemporaries, because I had seen them "in the field" [Respondent #99].

I strongly feel that a newly assigned supply officer should attend the entry level 6421 course after he has been on station at least 6 months. I know that I would have gotten much more out of the course if I had a basic understanding of supply before I went to Lowry [Respondent #351].

Revision of the SOOC. While this study validates the basic usefulness of the SOOC, the initial technical training for supply officers, several

changes should be made to improve the course. Supply officers in the field are finding the proper, efficient use of SBSS management products (computer-generated listings) to be increasingly essential to the successful discharge of their duties. Therefore, the SOOC ought to be structured around these management products: how to read them, how the various products interrelate, and how to use them to detect and solve problems.

To assist the students in bridging the gap between the classroom and the actual job situation, the SOOC ought to be as realistic as possible. Six respondents suggested (via the comment sheets) the SOOC include activities such as case studies, role playing, and problem-solving exercises. In addition, SOOC instructors should be well-qualified Air Force officers with current SBSS experience.

The SOOC should take a "systems view" of base supply. In other words, emphasis should be placed on how actions taken in one branch affect the other branches. Ten comment sheets showed suggestions for including the interrelationships of base supply branches in the SOOC. The same systems view should be applied to the relationships of supply with its customers and other base agencies. Teaching the importance of customer support was suggested in eight comment sheets, while ten comments mentioned the maintenance-supply interface.

Topics to be added to the SOOC should include operating a manual supply system in case of computer failure, mobility planning, wartime supply operations, and career planning for supply officers.

Advanced Courses. This study validated the usefulness of the Supply Systems Management Reports and Listings Course while illustrating the need

for more course quotas: only 50 percent of the respondents had attended the SSMRLC. The number of course administrations should be increased and the expanded opportunity for course attendance should be passed on to the officers actually serving at the base level.

The need for an SBSS update or "refresher" course seems quite apparent. The update course could be conducted at the Lowry Technical Training Center. However, budget and time constraints might be overcome through a form of computer-aided instruction or videotapes.

On-the-Job Training. To get the most benefit from Air Force training dollars, formal technical training and OJT must be two halves of a well-coordinated whole. Each Chief of Supply should be strongly encouraged to set up a formal OJT program for new supply officers. At the minimum, this program should include an overview of SBSS procedures and rotation among the branches of base supply. Ideally, each new officer would participate in this familiarization training before attending the SOOC. The time and effort required to establish and implement such a program would be repaid through the increased competence and confidence of the supply officers involved. As two respondents wrote:

Within our organization, a training program has been established to give the new supply officer an in-depth view of supply. Under this program, the officer spends a minimum of one month in each branch with additional training from a qualified supply officer. Additionally, our Chief of Supply is personally involved in providing every lieutenant constant feedback in areas of supply and officership [respondent #149].

It does almost no good to go to the Basic Supply Operations Officer Course before getting several months of OJT. The initial OJT training needs to be training throughout the supply account rather than just one branch. I feel that I taught myself how to be a supply officer . . . I think what is needed is frequent

additional formal supply training updates. Chiefs of Supply should be encouraged to set up good in-house officer training. (The Supply Training Manager should work up a training package). They should also be encouraged to rotate their officers so eventually we have well-rounded supply officers. Also this would ensure cooperation between branches. . . [Respondent #84].

Career Development. Several respondents expressed the need for more information on career planning for supply officers. This topic should be addressed to the SOOC. Follow-up information could then be provided through articles in AFRP 36-1, Officers' Career Newsletter, increased awareness of professional organizations such as the Society of Logistics Engineers, and meaningful updates of the career guidance information for the Supply Management Utilization Field in AFR 36-1, Officer Classification, and AFR 36-23, Officer Career Development. For instance, the most recent revisions of both AFR 36-1 and AFR 36-23 (cited in this study) do not include any mention of the SSMRLC. Both of these regulations should be revised to show where the SSMRLC fits in the recommended career progression of formal technical training, duty assignments, and advanced education.

None of these actions can or should take the place of career counseling by each supply officer's supervisor. Training and career development are essential responsibilities of supervision which must not be forgotten in the press of daily business.

Recommendations for Future Research

Additional Data Analysis. The raw data compiled for this study (Appendix A) could be analyzed using parametric statistics. After assuming the data to be interval (as opposed to ordinal) the same hypotheses could be tested using parametric statistics. The results could then be compared to the conclusions made in this study.

Study of Same Population. Several subgroups in this study displayed stronger levels of dissatisfaction with their technical training than did others. Additional research should be done to discover the reasons behind these feelings of dissatisfaction. These specific subgroups, such as the lieutenants, those officers with bachelor's degrees only, or the female officers, for example, should be surveyed again using a new survey instrument especially designed for that purpose. As an alternative strategy, sample respondents could be selected from the particular subgroup under study and asked to participate in a structured personal or telephone interview.

Also, either or both methods of data collection could be used for additional study of those subgroups who demonstrated no difference in perceptions of training adequacy: officers with or without prior enlisted service, officers with or without academic majors as recommended in AFR 36-1, and officers serving at different command levels, for example.

The survey instrument used in this study could be administered to the same group of supply officers five years from now to determine if advanced rank and additional practical experience alters the officers' perceptions of training. The officers could be identified by the year in which they completed the SOOC. Since the respondents to this study were not identified in any way, future researchers would be required to assume both surveys (present and future) were answered by approximately the same group of individuals.

Modified Survey Instrument. This survey instrument, with changes made to reflect current initial technical training, could be used to survey

again all company grade supply officers in five years to determine their perceptions of training. The same survey instrument, with appropriate modifications, could also be used to study graduates of formal technical training in other career utilization fields.

Longitudinal Studies. The training perceptions and career progression of a group of officers could be tracked, beginning with an exit critique following their graduation from the same SOOC class and continuing, perhaps, with a biennial evaluation. If the SOOC is changed significantly, then a longitudinal study should be conducted with the graduates of the last "old" class and one of the first "new" classes.

Fuels Officers. Although the authors of this paper elected not to study technical training for Air Force supply officers in fuels management positions, this topic certainly deserves attention. Since the Fuels Management Course is mandatory for fuels officers, its utility should be evaluated. Also, training perceptions and competency should be analyzed for those officers with the academic majors recommended by AFR 36-1.

Expert Opinion. The perceptions of supply "experts" regarding adequate technical training could be collected through a series of mail surveys, personal interviews, Delphi studies, or combinations thereof, using several groups as the objects of study. These supply "experts" could be senior supply officers (lieutenant colonels and above), Chiefs of Supply in charge of units earning "Outstanding" inspection ratings, supply officers receiving below-prime-zone promotions and so on.

On-the-Job Training. The respondents to this survey emphasized the importance of on the-job training (OJT). Various data collection methods

could be used to identify which base supply units had established OJT programs for officers. The training perceptions of officers who participated in established OJT programs could then be compared to the perceptions of officers who did not. This kind of study would be useful in determining the degree to which a good OJT program could enhance an officer's formal technical training.

Management Training. A number of comment sheets showed requests for training in military and civilian personnel management, briefing and writing techniques, and other administrative matters. While Air Force policy dictates these subjects should be taught at professional military education courses, it appears there may be gaps in the Air Force management education system. Supply officers' perceived need for management education should be explored. This inquiry could be expanded to include other officer career fields.

Supply Training in Other Organizations. Researchers might find ideas for improving Air Force supply officer training by studying supply training methods used by the U.S. Army, U.S. Navy, military services of other nations, government agencies, large businesses, and civilian universities offering degrees in business logistics and similar subjects. While a "supply manager" may perform very dissimilar functions in each of the above-named organizations, it is possible that some ideas for training improvement might be transferable.

Conclusion

The data collected and analyzed in the performance of this research project indicated initial technical training for supply officers needed

improvement. While basically satisfied with the structure of the SOOC, respondents indicated a desire for training to be more technically oriented, with emphasis placed on interpreting computer-generated management products and using them to solve branch problems. Respondents who were graduates of the SSMRLC validated its usefulness to their assigned duties. However, the small proportion of attendees (30 percent of respondents) accents the need to expand attendance opportunities so more supply officers could benefit from the training. Most significantly, respondents demonstrated strong belief in the value of practical job experience as a prerequisite to attending initial technical training. Those officers who showed the strongest dissatisfaction with their technical training were those, in most cases, with less than four years of Air Force supply experience. Formal OJT programs for new supply officers, coupled with revised initial technical training, would provide the greatest practical assistance to those supply officers with the greatest need.

Appendix A: Excerpts from AFR 36-1,

Officer Classification

AFR 36-1 Attachment 17 1 January 1984

A17-17/1E

Introduction

SUPPLY MANAGEMENT UTILIZATION FIELD (64)

1. The Supply Management Utilization Field encompasses program formulation, policy planning, direction, administration, management, and operation of all supply activities. Included in this field for assigned supplies, equipment, and petroleum products are functions of design, development, and analysis of automated or manual accounting systems; requirements determination and computation; allowances and authorizations; inventory and distribution control; accountability; reporting, stock fund operating programs preparation; and operations operating budget preparation.

2. Excluded from this field are functions of procurement and production of supply items, as well as supply services functions, which are covered in other utilization fields.

OFFICER AIR FORCE SPECIALTY SUPPLY MANAGEMENT STAFF OFFICER

1. SPECIALTY SUMMARY

Develops, formulates, and (or) implements plans, programs, and policies for operation, management, and administration of current and projected supply and fuels management systems; may serve as accountable officer; and may command supply and fuels units.

2. DUTIES AND RESPONSIBILITIES

a. *Formulates supply management policies.* Develops plans; establishes policies and procedures for management of supply and fuels activities including, but not limited to, functions of systems design and analysis, determination and computation of requirements, plans for activation and inactivation, facility requirements, equipment allowances, and supply and fuels accounting. Develops stock fund operating programs and determines operating budget. Determines war readiness requirements to include war and emergency supply and fuels support plans, and tactical and strategic movement of personnel, materiel, and units. Provides guidance on handling of war readiness materiel stocks including location, type of storage, protection, security, and quality control. Establishes technical materials for formal and on-the-job training programs.

b. *Coordinates supply management activities.* Assures commanders and staff are kept advised as to status of available supply and fuels support. Coordinates with all operating units and staff to determine present and projected requirements for equipment, fuels, and supplies; to test and evaluate procedures related to computation of requirements, reporting, shipment, and distribution of supplies, fuels, and equipment; and to assure timely training and efficient utilization of supply and fuels personnel. Coordinates with elements of Department of Defense and other governmental and civilian agencies to assure support of USAF units.

c. *Monitors and directs supply management activities.*

Organizes, directs, and monitors supply and fuels staff activities and supply field organizations.

Manages approved stock fund operating programs and directs changes required to maintain realistic and attainable objectives. Inspects supply and fuels activities to determine degree of compliance with current directives. Prepares operating budget reflecting funds needed for supplies and equipment used in operation of supply and fuels organizations. Reviews supply and fuels activity reports and compiles staff studies, or evaluates operating procedures to find problem areas and to develop corrective measures. Reviews supply and fuels problems submitted by staff or command and determines appropriate action. Resolves technical problems associated with supplies, equipment, and fuels areas.

d. *Develops functional data systems.* Designs and develops standard supply and fuels data systems, using mass data handling techniques, to meet needs of supply systems management. Provides functional systems knowledge and guidance for programming and analysis of data systems. Determines standards of supply and fuels systems operations and machine compatibility requirements. Develops and implements policies and procedures pertaining to supply and fuels data systems. Directs on-the-job training programs. Provides surveillance of data systems implemented and conducts inspections to determine degree of compliance with procedures and policies, as well as adequacy and effectiveness of supply and fuels data systems.

3. SPECIALTY QUALIFICATIONS

a. *Knowledge:*

(1) Knowledge of the following is mandatory: supply systems including related data systems, their capabilities, limitations, and technical characteristics; current USAF supply policy and doctrine; theory, fundamentals, and procedures of other areas of logistics; operating budget preparation; and USAF operations and organizations.

(2) Knowledge is desirable of logistics planning; war planning; statistical methods and procedures; methods of organizational and procedural analysis; and principles of

accounting.

(3) Knowledge is desirable of fuels systems, including their capabilities, limitations, and technical characteristics; current USAF energy policy and doctrine; and joint petroleum operations in unified commands.

b. *Education.* Master's degree in business administration, economics, management, industrial management, industrial engineering, petroleum engineering, chemical engineering, or computer sciences is desirable.

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c. *Experience.* Full qualification as a Supply Operations or Fuels Management Officer and 18 months' experience in Supply Management Staff Officer assignments is mandatory. It is mandatory that experience include formulating plans, policies and procedures in supply or fuels systems.

d. *Training:*

- (1) Completion of supply management staff officer course is desirable.
- (2) Completion of an advanced management course in supply and logistics is desirable.

4. SPECIALTY DATA

a. *Grade Spread.* Major through colonel.

b. *Related DOD Occupational Group:* 8B

OFFICER AIR FORCE SPECIALTY

SUPPLY OPERATIONS OFFICER

1. SPECIALTY SUMMARY

Directs, manages, and operates supply and fuels systems and programs, including supply data systems. May serve as an accountable officer, and may command supply units.

2. DUTIES AND RESPONSIBILITIES

a. *Plans and organizes supply and fuels operations activities.* Plans and organizes activities and programs to support equipment, fuels, and supply management. Determines organizational structure, personnel, and space requirements. Plans use of available space and personnel to meet needs of operational activities. Establishes performance standards, work schedules, and priorities, and provides controls for accomplishing tasks involved in supply and fuels management. Monitors personnel performance and training in relation to established standards. Organizes and plans on-the-job training and determines requirements for formal training.

b. *Directs supply and fuels operations activities.* Administers, directs, or manages operation of one or more activities engaged in selective management programs; inventory management; materiel facilities; determination, provisioning, computation, and analysis of current and projected materiel requirements; determination and application of authorizations and allowances; determination, establishment, and maintenance of stock levels; receipt of fuel from pipelines, trucks, rail cars, and marine vessels; fuel dispensing systems; bulk fuels storage facilities; cryogenics production and storage; test and evaluation of fuels samples; preparation and submission of reports; operation and management of assigned supply data systems; preparation of stock fund operating programs; and preparation and

management of budget and financial plans. Administers operations of special activities or programs, including nuclear and nonnuclear munitions, supply discipline, and security. Directs training programs. Inspects, reviews, and evaluates work methods, procedures, and effectiveness of personnel in accomplishing assigned tasks.

c. *Coordinates supply and fuels operations activities.* Coordinates with commander, staff, and operating units on status, capabilities, and limitations of supply and fuels activities; programs affecting supply and fuels consumption; support of unprogrammed requirements; and supply and fuels personnel requirements and training. Coordinates with appropriate agents of governmental agencies and commands supported under emergency or war plans and civilian suppliers to assure availability of missile and aircraft fuels to meet delivery schedules.

d. *Performs technical supply and fuels operations functions.* Interprets supply and fuels directives and ensures accountability is maintained properly for all supplies, equipment, and fuels. Determines effectiveness of functional data systems. Conducts evaluation of assigned supply data systems, applying approved standards and criteria to ensure proper implementation, operation, and results. Resolves technical problems related to storage, fire hazards, and truck filling or aircraft refueling areas.

3. SPECIALTY QUALIFICATIONS

a. *Knowledge:*

(1) Knowledge of the following is mandatory: supply and fuels systems organizations capabilities, limitations, and technical characteristics; supply policies and doctrine; interrelationship of elements of materiel field, particularly maintenance; theory, fundamentals, and procedures of operations operating budget preparation; supply data systems; properties and characteristics of petroleum products, liquid propellants, gases, and oxidizers, and USAF operations and organization.

(2) Knowledge is desirable of logistics planning, war planning, principles of accounting and management analysis, and statistical methods and procedures.

b. *Education:* Undergraduate academic specialization in business administration, accounting, petroleum engineering,

chemical engineering, industrial management, or engineering is desirable.

c. *Experience:* A minimum of 18 months' experience in supply or fuels operations assignments is mandatory. It is mandatory that experience include the responsibility for directing, managing, and operating supply or fuels systems.

d. *Training:*

(1) Completion of the supply operations officer course is desirable. Successful completion of this course may be substituted for 6 months' experience.

(2) Completion of a fuels management course is mandatory for assignment to fuels management positions. Successful completion of this course may be substituted for 6 months' experience.

(3) Completion of an automatic data processing course,

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covering theory, operation, capabilities, and limitations, is desirable.

(4) Completion of a course in systems analysis techniques and management analysis is desirable.

(5) Completion of a course in inventory management

and stock fund management is desirable.

(6) Completion of an indoctrination course on defense fuels systems is desirable.

(7) Completion of a supply management course covering nuclear and nonnuclear munitions management is desirable.

4. SPECIALTY DATA

a. *Grade Spread.* Second Lieutenant through major.

b. *Related DOD Occupational Group.* 3B

Appendix B: Excerpts from AFR 36-23,

Officer Career Development

AFR 36-23

30-1

Chapter 30

SUPPLY MANAGEMENT--CAREER PROGRESSION GUIDE

30-1. Purpose. This chapter gives information on career progression in the Supply Management Field.

a. Specialty Descriptions. The Supply Management Field includes program formulation; policy planning; and directing, administering, managing and operating supply systems in logistics support activities. These duties include designing, developing, and analyzing automated or manual supply systems; determining requirements; inventory control and distribution; accountability, reporting; and preparing budget and operating programs; financial plan management; and receiving, storing, dispensing, testing, and inspecting missile liquid propellants, fuels, oxidizers, pressurants, and petroleum fuels and products. The supply specialty codes listed below are described in detail in AFR 36-1. Specialties given here, as a framework for discussing career development, are:

(1) AFSC 6416--Supply Management Staff Officer (Major through Colonel). This AFSC represents about 47 percent of authorized supply positions and 35 percent of the authorized fuels positions. Personnel in this AFSC develop, formulate and implement plans, programs, and policies for operating supply systems in logistics support activities. Also, they may serve as accountable officers or may command supply units.

(2) AFSC 6424--Supply Operations Officer (Lieutenant through Major). This AFSC represents about 53 percent of the authorized supply positions. Officers in this specialty direct, manage, and operate supply systems (including data systems) in logistics support activities.

(3) AFSC 6434--Fuels Officer (Lieutenant through Major). This specialty represents about 63 percent of the authorized fuels positions. Officers in this specialty manage, direct, and operate fuel programs that involve petroleum fuels and lubricants, liquid missile fuels, and related items. They also may be assigned as accountable officers.

b. Career Broadening. Supply officers interested in advancing to top management positions are encouraged to seek career broadening opportunities. Within Supply Management, such opportunities include assignments to joint staffs, joint agencies, such as the Defense Logistics Agency or the Military Assistance Advisory Group (MAAG). Within the Systems and Logistics spectrum, 2 to 4 years of experience in fields such as the 40XX, 60XX, 65XX, or 66XX could be valuable. Other supply officers may apply for AFROTC or missile duty to broaden their experience base. Missile crew duty is the sole opportunity for most nonrated officers to acquire broadening experience in an operations area. At the same time it provides a graduate education opportunity in business, management, or economics through the Minuteman Education Program (MMEP). NOTE: In the supply career area, broadening opportunities are available between the 642X and 643X specialties as well as those listed

above. Although career broadening outside the 64XX primary utilization field is recommended for those officers seeking top level positions, it is not mandatory.

c. Education and Training. Supply management requires that young officers assume an unusual degree of responsibility at an early stage. Therefore, officers who enter this field should have a sound academic background in business administration, economics, management, petroleum refining engineering, chemical engineering, chemistry, industrial management, or computer science. Uncontrollable circumstances dictate that many good officers who do not have any of the above academic backgrounds enter the supply management field. These officers should seek off-duty or other education opportunities in business, management, or quantitative methods. Each supply officer should attend the Supply Operations Officer Course and the Supply Management Staff Officer Course as soon as possible. Fuels officers should complete the basic Fuels Management Course (Petroleum Fuels) before reporting to their initial duty assignment or as soon as possible thereafter. Graduate AFIT training related to supply is desirable. Technical and professional schools should be the basis for advancing an officer's capabilities and should be attended at the earliest possible date, to permit the officer to apply on-the-job training to his or her management tasks. Field grade officers' enrollment in supply or AFIT advanced course programs decreases in value, as rank and experience increases. However, training in specific supply short courses is desirable at any point in an officer's career, particularly when assigned to duties in which he or she has not had previous experience.

30-2. Specified Career Positions:

a. Designated Career Positions. The following positions require trained and experienced career supply management officers. These positions provide clear avenues of progression for the career supply management officer and should not be filled by officers who are broadening within

Position	Level
Chief of Supply	Base or Wing
Director of Supply and Services	HQ USAF, MAJCOM, or NAF
Staff Officer	HQ USAF, MAJCOM, or NAF
Chief of Energy Management	NAF
Division or Branch	
Chief of Energy Management	MAJCOM
Division or Branch	
Fuels Staff Officer	Directorate of Aerospace Fuels
Fuels Staff Officer	DFSC
Fuels Staff Officer	United Command (includes joint petroleum offices and joint area petroleum offices)
Director of AF Aerospace Fuels and Propellants Directorate	San Antonio Air Logistics Center
Chief of Energy or Mgmt	HQ USAF and JCS
Staff Officer	
Fuels Staff Officer	

b. Assignment Considerations. Proven ability in past supply duties is the most important consideration when assigning an officer to a designated career position. Only in the most extreme cases will an officer who is recently transferred to this field be assigned to a designated career position, if a more technically qualified officer is available, regardless of rank.

(1) Field grade officers should have at least 1 year of current experience in the standard base level supply system and have completed the Supply Management Staff Course.

(2) Supply officers who are completing an assignment outside the standard supply system and officers from other logistics specialties should complete the Supply Systems Management Course.

(3) An appropriate graduate degree and completing intermediate or senior service school is desirable for these positions.

c. Career Broadening Positions. The Supply Field benefits by incorporating into its personnel resources officers who are knowledgeable in other career areas, particularly those officers from the Aircraft Maintenance/Avionics (40XX), Transportation (60XX), Procurement Management (65XX), Logistics Plans and Programs (66XX), and Computer Technology (51XX) Utilization Fields. These lateral transferees into the Supply Field must be given initial ATC specialist training and then be assigned to operating level positions, preferably in the standard base level supply organization. This gives the greatest opportunity for achieving qualification in AFSC 6434, 6424, or 6416. Lateral transferees should be officers who have demonstrated above-average ability in their former career fields, possess an exceptional degree of managerial talent, and have demonstrated leadership potential. It is preferred that lateral transfers occur after AFIT is completed. However, lateral transferees will not be placed in designated career positions until they are fully qualified, unless the circumstances are most unusual. It is preferable to have a qualified career supply officer of lesser rank fill a designated career position than to have a transferee with the authorized rank.

30-3. Career Progression. The guide (Figure 30-1) shows five phases of progression, each of which is related to years of active service, military grade, job assignments, technical and service schools, and education levels. These phase points should be considered as flexible, in that they are influenced by Air Force needs and the officer's desires and ambitions.

a. Initial Phase (0 through 2 Years)

(1) Assignments. As a rule, officers will enter the Supply Field from ROTC, Officer Training School or a Service Academy. Before or within the first 6 months of his or her initial duty assignment, the officer should complete the Supply Operations Course or Fuels Management Course. During the subsequent 2 to 3 years, assignments are usually in base level operations. Officers may be assigned as supervisors within the base supply com-

plex; as materiel control officers for aircraft maintenance, communications, or civil engineer activities; as supply officers for munitions, communications, or civil engineer activities, or as supply officers for munitions or radar squadrons. Supervisors and commanders should judiciously rotate officers among positions that are commensurate with their rank. Through such rotations, many officers should be able to gain experience in more than one facet of base level supply operations at their first duty station. The supervisor should arrange indoctrination briefings in related duties such as maintenance, procurement, and transportation.

(2) Education and Training

(a) All officers who enter this career field should possess a baccalaureate degree, preferably in business administration, accounting, mathematics, or engineering, with a major in fields such as management, industrial management, marketing, or automatic data processing.

(b) Officers should complete the Supply Operations Officer Course as early as practical during this phase.

b. Intermediate Development Phase (3 through 6 Years)

(1) Assignments. Officers will continue to perform duties primarily at base level. Officers who will advance to key managerial positions in the specialty should have a depth of experience in managing and supervising supply operations. Those who have not previously held management positions within the standard base level supply organization should do so during this phase. Officers will receive expanded supervisory and functional responsibilities. Some officers will gain staff experience at wing or group level. From the group of more capable officers, some will be given an opportunity to perform at higher staff levels and in special assignments. Supervisors should make sure that officers in this phase take part in activities (boards, courts, and so forth) that interface with other base duties and broaden the officer's overall experience.

(2) Education and Training

(a) The officer should take additional technical and management training, short courses, or correspondence courses that apply to the supply field.

(b) The officer should take off-duty education courses to prepare for AFIT graduate school education.

(c) All career officers should complete the Squadron Officer School in residence or by correspondence.

(d) Officers who are interested in being assigned to the most responsible positions should apply for AFIT graduate education after completing 4 years of active commissioned service. Graduate degrees in logistics management, industrial management, industrial engineering, business administration (MBA), or data processing are preferable.

c. Advanced Development Phase (7 through 14 Years)

(1) Assignments. A significant management con-

sideration during this period should be to rotate officers into different echelons of command, MAJCOMs, and geographical areas. A multicombat background and exposure to diverse overseas operational conditions is highly desirable. Highly qualified captains and majors will occupy key branch positions in base level supply. Management and procedure experience is desirable for eventual Chief of Supply duty. Officers who have not previously acquired to broadened exposure of a staff tour should do so during this period. Depot level experience with DLA or AFLC and inspector general duty is desirable during this period. Some officers with outstanding performance credentials will be selected for special category assignments such as HQ USAF, joint staffs, joint agencies, and MAAGs. Rated officers with the necessary academic backgrounds are encouraged to seek broadening in the supply field. Supply officers who desire to broaden into related materiel and logistics areas should consider doing so during this phase.

(2) Education and Training:

(a) Officers who enter the supply field in this phase should attend the Supply Operations Officer Course or Facts Management Course.

(b) Experienced supply officers should complete the Supply Management Staff Officer Course.

(c) Officers transitioning from assignments outside the standard supply systems to duties that involve intimate knowledge of that system should attend the Supply System Management Course.

(d) Officers should have completed Squadron Officer School in residence or by correspondence. Selected majors will attend intermediate service schools. The others should complete ACSC by correspondence or in seminar.

(e) Completing a related graduate education program is a desirable prerequisite for a number of key positions in the supply field. Officers who complete a related graduate education program will be assigned to duties that use their training to the maximum.

d. Staff Phase (15 through 21 Years)

(1) Assignments. Highly qualified officers should be assigned as Chief of Supply. In addition usual assignments during this phase will include staff duty at MAJCOM and NAF level, as well as key depot positions. All of these duties will entail significant managerial responsibilities. Officers who have been consistently outstanding can expect assignments to HQ USAF or joint service activities. Some officers will perform duties as directors of logistics, AFSC 0046. Officers are encouraged to request assignments that diversify their experience and enable them to demonstrate ability to perform successfully both as line managers and as staff planners.

(2) Education and Training. As officers advance in this phase they should seek advanced short management and computer systems courses directed toward new techniques and their application to the supply field.

e. Executive or Leader Phase (22 Years Plus)

(1) Assignments. These officers will occupy key management positions at MAJCOM, HQ USAF, or higher level. Included will be executive level depot positions with DLA or AFLC, staff directorate and division chief positions, and assignment as Chief of Supply at major US Air Force installations.

(2) Education and Training. Selected officers will attend the NWC, ICAF, Executive Short Courses (Harvard, industry, and so forth), or comparable schools. It is desirable that all major schooling be completed before the 22nd year of service.

Appendix C: Excerpts from AFR 50-5,

USAF Formal Schools

AFR 50-5 1 March 1984

3-64

130AR6011 000—Transportation Staff Officer—PDS Code ETR—
0008C—Sheppard: 9 wk 2 days MASI 0153004—Dec 79

Procedures and techniques of advanced traffic management; military and commercial air, motor and rail movement management and transportation funds; application of automatic data processing in everyday transportation management; within 000 application of military logistics; development of transportation plans and programs; staff surveillance of transportation activities; problems peculiar to transportation of hazardous materials; management of vehicle operations and maintenance activities; and packaging and packing activities.

Prerequisites: Limited to senior captains and higher grades; other military personnel with comparable grade and qualifications; and civilians GS-7 or higher with a minimum of 5 years' experience in transportation career field NCOs (MSGT-CMSGT) serving in or selected for chief of transportation positions at numbered Air Force or higher or positions that require overlap in all transportation functions; International student ECL 70.

Special Requirements: SECRET clearance is required by course start date.

Admin Instructions: Include variation in itinerary in orders to allow students to participate in field trips in course control documents.

Quota Control: HQ AFMPC/MPCRAMI/MPCROSSD and HQ ATC/TTPP.

130BR6051 000—Transportation Officer—PDS Code UCI—0008C—
Sheppard: 12 wk 1 day MASI 0153011—Dec 79

Movement of material and personnel by commercial and military air, water, rail, pipeline, and motor transportation; operation of traffic management office; movement of passengers and cargo; movement and storage of household goods; traffic documentation; employment and management of airlift; air terminal organization and operation; preservation, packaging, and packing of materials; aerial delivery system; principles of aircraft weight and balance; airport duties and responsibilities of vehicle operations and vehicle maintenance management; officers' organization and layout of vehicle maintenance management shop; vehicle maintenance and organization management; maintenance and operation inspection system; personnel management and supervision and training.

Prerequisites: International student ECL 70.

Admin Instructions: Include variation in itinerary authority in orders to allow student participation in field trip.

Quota Control: HQ AFMPC/MPCRAMI and HQ ATC/TTPP.

630AR6211 000—Services Staff Officer—PDS Code YTH—0008C—
Lowry: 1 wk 2 days—Jan 82

Training in the functional responsibilities of services role of consumer advocacy; management techniques; intrabase relations; facilities improvement; resource management; contracting; personnel management; pulse points and readiness.

Prerequisites: Services officers with more than 3 years in the services career field; top three NCOs from the services career field.

Quota Control: Officers HQ AFMPC/MPCROSSD; others HQ ATC/TTPP.

6302R6221 000—Billings Management—PDS Code GJC—0008C—
Lowry: 3 wk—Jan 82

Training in management and control of bachelor and transient quarters programming and maintenance of quarters; RAF management and accounting; labor management; supervisory skills; customer service; housekeeping management; general management techniques and responsibilities; for contingency plans.

Prerequisites: Officer, noncommissioned officer (MSGT through CMMSGT) and civilian personnel; AFSC 602X, 6159, 6170 assigned duties and fielding activities.

Special Requirements: Bring the following materials for discussion and use in the course: DD Form 1657 (latest); facility slides (desk-topical); DD-VAG 2 optional slides (if available); forms (data collection form for AF form 516; maid checklist; capital expenditure budget; financial statement; customer critique form; maid checklist; training program developed by base; occupancy responsibility letter; and hand calculator).

Quota Control: Officers HQ AFMPC/MPCROSSD; others HQ ATC/TTPP.

630BR6221 001—Services Operations Officer—PDS Code YJQ—
0008C—Lowry: 3 wk AFSC 6221 MASI 0152036—Jan 83

Training in the 62XX career program; communications and operations; security; consumer affairs; intrabase relations; Army and Air Force Exchange Service; Air Force Commissary Service; monetary affairs; linen exchange; food service; billeting; furnishings management; readiness; personnel management; and the Air Force Occupational Safety and Health Program (AFOSH).

Prerequisites: International student ECL 70.

Special Requirements: Bring a fatigue uniform and seasonal outerwear.

Quota Control: Officers HQ AFMPC/MPCROSSD; others HQ ATC/TTPP.

6302R6234 000—Commissary Operations—PDS Code YBQ—0008C—
Lowry: 3 wk—Jan 82

Training in management and control of commissaries; organization, equipment and personnel management; requisitioning; receiving; warehousing; pricing procedures; issues; sales display and merchandising; inventory and accounting procedures; commissary operating program; and WRM responsibilities.

Prerequisites: Officer (AFSC 623X) noncommissioned officer (AFSC 611X) MSGT or higher AFSC 612X) SSgt or higher) or civilian personnel; filling management positions.

Quota Control: HQ ATC/TTPP.

630BR6241 002—Food Service Officer—PDS Code 3D4—0008C—
Lowry: 2 wk 4 days AFSC 6241—Jan 83

Trains personnel in the 6244 career program. Training includes descriptions; security; introduction to services; food service organizational description; interaction with base agencies; food service operational principles; food service management fundamentals; principles of contract administration; management techniques; training management; consumer affairs; facilities improvement; and key management indicators.

Prerequisites: Food service officers or civilians (GS-7 or above) assigned to equivalent position.

Special Requirements: Fatigue uniform and seasonal outerwear.

Quota Control: USAF HQ AFMPC/MPCROSSD; others HQ ATC/TTPP.

630AP6411 001—Supply Management Staff Officer—PDS Code COS—
0008B—Lowry: 7 wk MASI 0152008—Mar 84

Prepares fully qualified, experienced supply officers for duty as staff officers in the USAF supply system through seminars in the use of applied managerial techniques; interrelationship between various base support functions and base supply complex; relationship with wholesale sources; management and analysis of supply and fuels accounts; general techniques of internal supply operations; and management techniques of functional areas directly associated with the chief of supply.

*Prerequisites: Captain and above with at least 6 years' experience in USAF Standard Base Supply System; field grade officers fully qualified in other logistics field may attend after completion of Course 6301P6424 001. Civilian GS-9 and above with at least 6 years' experience in USAF Standard Base Supply Systems may attend. Selected NCOs (MSGT or above AFSC 6457, 6459) whose functional duties require that they receive management training may attend.

International students must meet the above criteria and also have an ECL 70SA.

Special Requirements: Students will bring an M-32 from their account for use in the seminars and case study. Students will call the course instructor before arriving at Lowry AFB at least 3 weeks before class start date for student presentations. Call AUTOVON 926-4223.

Quota Control: USAF HQ AFMPC MPCROSIE, others, HQ ATC/TTPP

G30LR6421 000—Fuels Management Officer—POS Code 1PB—0000B—
Chanute 5 wk, MASL D152019—Jan 83

Plan, organize, direct and coordinate fuels operations activities, perform technical fuels operations functions, determine organizational structure, plan use of personnel and space. Establish performance standards, work schedules and priorities, monitors personnel performance and training, quantity and quality control of fuels and liquid oxygen receipt, storage, transfer and dispensing of fuels, lubricants, demineralized water and liquid oxygen, utilization of permanently installed dispensing systems, air transportation systems and mobile equipment, automated fuels stock fund accounting and document control, fire hazards, and fuel safety precautions.

Prerequisites: Civilians must be assigned to, or in training for, officer positions at grade GS-7 or higher. Personnel who have graduated from the G30R6331A 001 or G30R6431 000 courses need not attend. International students ECL 70.

Special Requirements: Students must bring appropriate utility uniform or clothing.

Quota Control: USAF HQ AFMPC MPCROSIA, others, HQ ATC/TTPP

G30BN6421 701—Supply Operations Officer—POS Code C00—0000B—
Lowry 4 wk 3 days AFSS 6421, MASL D152007—Sep 78

Oriented toward management of standard base supply organizations using the UNIVAC 1950-II computer. Training includes procedures for the requisition, receipt, storage, stock control, issue, shipment, disposition, demilitarization, and accounting for supplies and equipment by AF activities.

Prerequisites: Civilians must be assigned to, or in training for, officer positions at grade GS-7 or higher. International student ECL 70SA.

Quota Control: HQ AFMPC MPCMOA and HQ ATC/TTPP

G30R6424 001—Supply Systems Management Reports and Listings—
POS Code F80—0000B—Lowry 2 wk 3 days, MASL D152023—Jun 83

Trains personnel in management of standard base supply through management reports and listings, presents supply organization, computer system, records management, Air Force stock fund, resource management systems, customer support function, materiel management, equipment management, inventory procedures, and document control. Focuses on branch and section midmanagement problems.

Prerequisites: Course is designed for personnel versed in standard base supply procedures. Material is focused on midmanagement problems (branch and section level). Any officer (Sgt or above or GS-7 and above or ML and MS whose duties require either management or evaluation of the SRSS system. Auditors, OSI, and Field maintenance personnel who have interface with SSSS may attend. Personnel who have attended the G30R6411 001 and the G30R6421 001 course within the past 2 years are not eligible to attend. International students with ECL 70 SU are eligible to attend after completing the G30R6421 001 course.

Special Requirement: Students will bring an M-32 from their account for use in this course.

Quota Control: HQ ATC/TTPP

G30R6531 007—Central Systems Level Contracting—POS Code U7X—
0000B—Lowry 5 wk, MASL D152016—Jun 83

Training in the skills and knowledge necessary to perform within an Air Force Logistics Command or Air Force Systems Command (AFLC/AFSC) level contracting position. Scope of training includes fundamentals of Air Force contracting and manufacturing policy, contracting organization and mission, career development, contracting publications, standards of conduct, contract law and types of contracts. Special emphasis is placed upon Central or Systems (AFLC/AFSC) contracting to provide an understanding of concepts and functions such as life cycle phases, systems program office, advanced planning, statement of work, preparation of requests for and evaluation of proposals, negotiation, source selection, contract preparation, development engineering, production planning and manufacturing operations, industrial material management, subcontract management, quality assurance, contract management, terminations and contract closeout.

Prerequisites: Grade 2d Lt and above, civilians GS-5 thru GS-9 who meet Civil Service qualification requirements for entry into the GS 1102 and 1105 series contracting positions. Personnel who have completed the ALMCO (DDI 4320) course or the Base Level Contracting course (G30R6531-008) are not eligible to attend. International student ECL 70SA.

Quota Control: USAF HQ AFMPC MPCROSIC, others, HQ ATC/TTPP

G30R6531 007—Central Systems Level Contracting—POS Code ZB1—
Lowry 2 wk 4 days—Jun 83

Training in the skills and knowledge necessary to perform within an Air Force Logistics Command or Air Force Systems Command (AFLC/AFSC) level contracting position. Scope of training includes fundamentals of Air Force contracting and manufacturing policy, contracting organization and mission, career development, contracting publications, standards of conduct, contract law and types of contracts. Special emphasis is placed upon Central or Systems (AFLC/AFSC) contracting to provide an understanding of concepts and functions such as life cycle phases, systems program office, advanced planning, statement of work, preparation of requests for and evaluation of proposals, negotiation, source selection, contract preparation, development engineering, production planning and manufacturing operations, industrial material management, subcontract management, quality assurance, contract management, terminations and contract closeout.

Prerequisites: Grade 2d Lt and above, civilians GS-5 thru GS-9 who meet civil service qualification requirements for entry into the GS 1102 and 1105 series contracting positions. Only those personnel who have completed the ALMCO (DDI 4321) course or the Base Level Contracting course (G30R6531-008) are eligible to attend.

Quota Control: USAF officer HQ AFMPC MPCROSIA, other HQ ATC/TTPP

G30R6531 008—Base Level Contracting—POS Code ZBA—Lowry 5
wk, MASL D152026—Dec 83

Course is oriented to base level contracting functions and provides a basic understanding of contracting to include AF contracting policy and procedures, publications, statutes, authorities, advertised and negotiated contracts, quality assurance, evaluation, contract administration and CIAPS. This course replaces G30R6531 002.

Prerequisites: Grade 2d Lt and above, civilian personnel GS-5 through GS-9 who meet Civil Service qualification requirements for entry into the GS 1102 or 1105 series contracting positions. Personnel who have completed the ALMCO (DDI 4320) course or the Central Systems Level Contracting course (G30R6531 007) G40G5531 001) are not eligible to attend. ECL 70SA.

Quota Control: HQ AFMPC MPCMOA and HQ ATC/TTPP

Appendix D: Survey Instrument



DEPARTMENT OF THE AIR FORCE
AIR FORCE INSTITUTE OF TECHNOLOGY (AIU)
WRIGHT-PATTERSON AIR FORCE BASE, OH 45433

APR 30 1984

REPLY TO: LSH/AFIT/ULM/LSH/845-57/Capt K. Currie/1Lt P. Brodeur/AUTOVON 735-5361

SUBJECT: Supply Officer Training Questionnaire

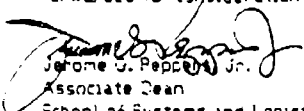
TO: USAF Supply Officers

1. The attached questionnaire was prepared by a graduate degree research team for their thesis at the Air Force Institute of Technology, Wright-Patterson AFB, OH. The purpose of the questionnaire is to acquire data concerning supply officers' perception of their technical training.

2. You are requested to provide an answer or comment for each question. Headquarters USAF Survey Control Number 34-34 has been assigned to this questionnaire. Your participation in this research is voluntary. If you are presently serving in a duals officer position, please disregard this letter and survey.

3. Your responses to the questions will be held confidential. Please remove the comment sheet (page 9, 10) and return it with the completed answer sheet. Please return these items in the enclosed envelope within one week after receipt.

4. Your cooperation in providing this data will be appreciated and will be very beneficial in providing comprehensive information regarding technical training for supply officers. This survey has been coordinated with the Supply Training Manager, 3400 Technical Training Wing, Lowry AFB, Colorado and the completed research project will be forwarded for consideration in future curriculum evaluation.


Jerome G. Peppers, Jr.
Associate Dean
School of Systems and Logistics

- 2 Atch
1. Questionnaire
2. Return Envelope

AIR FORCE—A GREAT WAY OF LIFE

SUPPLY OFFICER TRAINING QUESTIONNAIRE INSTRUCTIONS

Headquarters USAF Survey Control Number 84-34

This questionnaire is designed to obtain information for use in determining the supply officer's perception of his/her training in order to make recommendations for improvement. The questionnaire contains 68 items. All numbered items must be answered by filling in the appropriate spaces on the machine-scored answer sheet provided in the survey package. If for any item you do not find a response that fits your situation exactly, use the one that is the closest to the way you feel. Please use a "soft lead" (No. 2) pencil, and observe the following:

1. Make heavy black marks that fill in the space of the response you select.
2. Erase cleanly any responses you wish to change.
3. Make no stray markings of any kind on the answer sheets.
4. Please avoid stapling, folding or tearing the answer sheet.

Each response block has 10 spaces (numbered 1 through 10) or a 1-10 scale. The majority of the questions will use only spaces 1 through 7 but several of the demographics questions will require the use of spaces 8, 9, 10. PAGE 10 OF THE QUESTIONNAIRE IS RESERVED FOR YOUR COMMENTS.

Page 9 of the questionnaire will contain blanks for questions requiring a written response; this page (page 9) is to be removed and returned with the coded answer sheet if any of the blank areas are filled in. The questionnaire items are responded to by marking the appropriate space on the answer sheet as in the following example:

1-----2-----3-----4-----5-----6-----7
^-----^-----^-----^-----^-----^-----^-----^

Very Useful-----Neither Useful Nor Useless-----Very Useless

For the following items, please rate the usefulness of areas of training received during the basic supply officer training course

Telephone Etiquette

(If you feel that TELEPHONE ETIQUETTE was a "Very Useful" area of training you would "blacken in" the number 1 on the answer sheet to correspond to the statement (very useful = 1)

Sample response: 1 2 3 4 5 6 7 8 9 10
■-□-□-□-□-□-□-□-□-□

AFTER YOU HAVE COMPLETED THE QUESTIONNAIRE AND HAVE CHECKED TO MAKE SURE YOU HAVE MARKED THE ANSWER SHEET CORRECTLY, RETURN THE ANSWER SHEET (AND PAGE 9/10 OF THE QUESTIONNAIRE IF THERE ARE ANY WRITTEN RESPONSES OR COMMENTS) IN THE ENVELOPE PROVIDED. PLEASE! DO NOT FILL IN YOUR NAME, SSAN, OR ANY IDENTIFYING INFORMATION SO YOUR RESPONSES WILL REMAIN ANONYMOUS. PLEASE ACCEPT OUR THANKS FOR YOUR ASSISTANCE!

1. Did you attend the basic Supply Operations Officer course (6421) at Lowry AFB, CO?

1. Yes
2. No*

* If reply to question 1 is "No," skip to question 20.

2. In what calendar year did you attend the basic Supply Operations Officer course?

1. Prior to 1973
2. 1973 thru 1974
3. 1975 thru 1976
4. 1977 thru 1978
5. 1979 thru 1980
6. 1981 thru 1982
7. 1983 thru 1984

Rate the following subjects taught by the Lowry Technical Training Center on their USEFULNESS.

USEFULNESS - to what extent do you use what you learned in the basic Supply Operations Officer course to perform your duties and responsibilities as a supply officer. Circle the NUMBER that most closely corresponds to your answer based on the following 7-point scale:

1-----2-----3-----4-----5-----6-----7
^-----^-----^-----^-----^-----^-----^
Very Useful-----Neither Useful Nor Useless-----Very Useless

3. WHOLESALE/RETAIL SUPPLY OPERATIONS - Lessons Covered: Overview of Supply System, Supply Policymaking Organizations, Wholesale Supply Operations, Technical Orders and Supply Cataloging, Retail Supply Operation, UNIVAC 1050-II Computer System, Satellite Supply Management Operations, and File Maintenance Activities.

USEFULNESS 1 2 3 4 5 6 7

4. MATERIEL SUPPORT PROCEDURES - Lessons Covered: Issue Procedures, Mission Capability (MICAP) Management, Repair Cycle, Supply Point, and Bench Stock.

USEFULNESS 1 2 3 4 5 6 7

5. MATERIEL MANAGEMENT - Lessons Covered: Post-Post Procedures, Stock Level Procedures, Due-out Validation, Requisition Procedures, Base Redistributable Materiel, War Reserve Materiel (WRM).

USEFULNESS 1 2 3 4 5 6 7

Please continue using the same scale for questions 6, 7, and 8.

1-----2-----3-----4-----5-----6-----7
 ^-----^-----
 Very Useful-----Neither Useful Nor Useless-----Very Useless

6. CUSTOMER SUPPORT AND STORAGE - Lessons covered: Equipment Allowances and Authorization, Retail Outlets, Receiving Procedures, Storage Procedures, Inspection Procedures, Delivery Procedures.

USEFULNESS 1 2 3 4 5 6 7

7. SUPPLY SYSTEMS/MANAGEMENT - Lessons Covered: Inventory Procedures, Document Control Procedures, File Interrogation System, Management and Procedures.

USEFULNESS 1 2 3 4 5 6 7

8. SPECIAL SUBJECTS - Lessons Covered: Materiel Control Responsibilities, Base Fuels Management, Base Munitions Management, Engine Management, Civilian Personnel Management, USAF Security Program, USAF Graduate Evaluation Program.

USEFULNESS 1 2 3 4 5 6 7

Rate the following subjects taught by the Lowry Technical Training Center based on the COVERAGE

COVERAGE - relate this section to your perception of the coverage of the subject. Circle the NUMBER that most closely corresponds to your answer based on the following 7-point scale:

1-----2-----3-----4-----5-----6-----7
 ^-----^-----
 Needed Less-----Needed Neither More nor Less-----Needed More

9. WHOLESALE/RETAIL SUPPLY OPERATIONS - Lessons Covered: Overview of Supply System, Supply Policymaking Organizations, Wholesale Supply Operations, Technical Orders and Supply Cataloging, Retail Supply Operation, UNIVAC 1050-II Computer System, Satellite Supply Management Operations, and File Maintenance Activities.

COVERAGE 1 2 3 4 5 6 7

10. MATERIEL SUPPORT PROCEDURES - Lessons Covered: Issue Procedures, Mission Capability (MICAP) Management, Repair Cycle, Supply Point, and Bench Stock.

COVERAGE 1 2 3 4 5 6 7

Please continue using the same scale for questions 11, 12, 13, and 14.

1-----2-----3-----4-----5-----6-----7
 ^-----^-----^-----^-----^-----^-----^-----^

Needed Less-----Needed Neither More nor Less-----Needed More

11. MATERIEL MANAGEMENT - Lessons Covered: Post-Post Procedures, Stock Level Procedures, Due-out Validation, Requisition Procedures, Base Redistributable Materiel, War Reserve Materiel (WRM).

COVERAGE 1 2 3 4 5 6 7

12. CUSTOMER SUPPORT AND STORAGE - Lessons Covered: Equipment Allowances and Authorization, Retail Outlets, Receiving Procedures, Storage Procedures, Inspection Procedures, Delivery Procedures.

COVERAGE 1 2 3 4 5 6 7

13. SUPPLY SYSTEMS/MANAGEMENT - Lessons Covered: Inventory Procedures, Document Control Procedures, File Interrogation System, Management and Procedures.

COVERAGE 1 2 3 4 5 6 7

14. SPECIAL SUBJECTS - Lessons Covered: Materiel Control Responsibilities, Base Fuels Management, Base Munitions Management, Engine Management, Civilian Personnel Management, USAF Security Program, USAF Graduate Evaluation Program.

COVERAGE 1 2 3 4 5 6 7

For each of the following statements, select and circle the number most closely corresponding to the extent of your agreement or disagreement, based on the following 7-point scale:

1-----2-----3-----4-----5-----6-----7
 ^-----^-----^-----^-----^-----^-----^-----^

Strongly Agree-----Neither Agree nor Disagree-----Strongly Disagree

15. The basic Supply Operations Officer course (6421) does an adequate job in preparing entry level Supply Officers.

1 2 3 4 5 6 7

16. Basic Supply Operations Officer course teaches too much theory.

1 2 3 4 5 6 7

17. Basic Supply Operations Officer course training has little relevance beyond the first two assignments.

1 2 3 4 5 6 7

Please continue using the same scale for questions 18 through 23.

1-----2-----3-----4-----5-----6-----7
^-----^-----^-----^-----^-----^-----^
Strongly Agree----Neither Agree nor Disagree----Strongly Disagree

18. Personnel scheduled to attend the basic supply course should first be sent directly to their unit/command of assignment to gain some practical experience and perspective.

1 2 3 4 5 6 7

19. The course content of the basic Supply Operations Officer course does not present enough technical knowledge to cope with the complexities of modern supply.

1 2 3 4 5 6 7

20. The best way to develop the skills and knowledge necessary for a position in supply management is through on the job training (OJT) as opposed to formal technical training.

1 2 3 4 5 6 7

21. Overall, I am satisfied with the degree, depth, and scope of the supply training I have received so far.

1 2 3 4 5 6 7

22. If I have any weaknesses, they are primarily in technical knowledge.

1 2 3 4 5 6 7

23. Did you attend the Supply Systems Management Reports and Listings course (6424)?

1. Yes
2. No*

If the reply to question 23 was "No," skip to question 27.

For each of the following statements, select and circle the number most closely corresponding to the extent of your agreement or disagreement, based on the following 7-point scale:

1-----2-----3-----4-----5-----6-----7
^-----^-----^-----^-----^-----^-----^

Strongly Agree-----Neither Agree Nor Disagree-----Strongly Disagree

24. The information provided by the Supply Systems Management Reports and Listing course helpful to me on the job.

1 2 3 4 5 6 7

25. The Systems Management Reports and Listings course was given at the appropriate time in my career because the information would not have been useful without that extra "time in the field".

1 2 3 4 5 6 7

26. I would have preferred that the Systems Management Reports and Listings course be given at an earlier point because that information could have been used in day-to-day business.

1 2 3 4 5 6 7

27. Do you think anything should be added to the basic Supply Operations Officer course (6421)?

1. Yes
2. No*
3. Unfamiliar with course*

* If your reply was "No" or "Unfamiliar with course" please skip to question 54.

Please rate the following categories of supply topics as to their perceived usefulness to you if added to or expanded within the basic Supply Operations Officer course.

For each of the following statements (28 thru 52), select and circle the number most closely corresponding to the extent of your agreement or disagreement, based on the following 7-point scale:

1-----2-----3-----4-----5-----6-----7
^-----^-----^-----^-----^-----^-----^

Very Useful-----Neither Useful Nor Useless-----Very Useless

1 2 3 4 5 6 7 - 28. Coverage of the remainder of Air Force Manual 67-1, (Volumes I thru IV)

1 2 3 4 5 6 7 - 29. Expanded coverage of the computer's role in base supply

For each of the following statements, select and circle the number most closely corresponding to the extent of your agreement or disagreement, based on the following 7-point scale:

1-----2-----3-----4-----5-----6-----7
 ^-----^-----^-----^-----^-----^-----^
 Very Useful-----Neither Useful Nor Useless-----Very Useless

- 1 2 3 4 5 6 7 - 30. Analysis of allowance and authorization management procedures and products
- 1 2 3 4 5 6 7 - 31. Analysis of requirements determination procedures
- 1 2 3 4 5 6 7 - 32. Principles of the Air Force Stock Fund
- 1 2 3 4 5 6 7 - 33. WRM Management above the base level
- 1 2 3 4 5 6 7 - 34. Mini-computer, micro-computer role in supply
- 1 2 3 4 5 6 7 - 35. An explanation of Equipment Management above the base level
- 1 2 3 4 5 6 7 - 36. In-depth look at the Maintenance-Supply interface
- 1 2 3 4 5 6 7 - 37. Expanded coverage of the supply role in mobility
- 1 2 3 4 5 6 7 - 38. SBSS Organization Structure
- 1 2 3 4 5 6 7 - 39. An explanation of computer scheduling process and listing
- 1 2 3 4 5 6 7 - 40. Internal records maintenance and procedures (Records Maintenance)
- 1 2 3 4 5 6 7 - 41. Delinquent document and reject control procedures
- 1 2 3 4 5 6 7 - 42. Inventory procedures
- 1 2 3 4 5 6 7 - 43. Explanation and use of SBSS management products
- 1 2 3 4 5 6 7 - 44. Demand processing procedures and issuing systems
- 1 2 3 4 5 6 7 - 45. Repair cycle management procedures and products
- 1 2 3 4 5 6 7 - 46. Bench stock management procedures and products
- 1 2 3 4 5 6 7 - 47. Retail outlet management procedures
- 1 2 3 4 5 6 7 - 48. Requisition procedures and management products

Please continue using the same scale for questions 49 through 52.

1-----2-----3-----4-----5-----6-----7
^-----^-----^-----^-----^-----^-----^-----
Very Useful-----Neither Useful Nor Useless-----Very Useless

1 2 3 4 5 6 7 - 49. Analysis of stock fund management products

1 2 3 4 5 6 7 - 50. Analysis of selected inquiries

1 2 3 4 5 6 7 - 51. Analysis of selected transaction/document registers

1 2 3 4 5 6 7 - 52. Analysis of the M32 report

53. I would like to see other subjects added but they are not listed in items 29 through 53.

1. Yes *
2. No

* If your reply to question 53 was "Yes," please include your top three topics along with your comments on page i0.

54. What is your current grade?

1. Second Lieutenant
2. First Lieutenant
3. Captain
4. Major

55. How many years of active commissioned service do you have?

1. less than 2 years
2. 2 years, but less than 4 years
3. 4 years, but less than 6 years
4. 6 years, but less than 8 years
5. 8 years, but less than 10 years
6. 10 years or more

56. What is your sex?

1. male
2. female

57. What is your highest education level?

1. bachelor's degree
2. master's degree
3. doctoral degree

58. My primary AFSC is in the 64XX series.

1. Yes
2. No

59. My duty AFSC is in the 64XX series.

1. Yes
2. No

60. How many years of prior enlisted service do you have?

1. I do not have prior enlisted service.
2. Less than 2 years
3. 2 years, but less than 4 years
4. 4 years, but less than 6 years
5. 6 years, but less than 8 years
6. 8 years, but less than 10 years
7. 10 years or more

61. Considering your total military service, how many years of supply experience do you have?

1. Less than 2 years
2. 2 years, but less than 4 years
3. 4 years, but less than 6 years
4. 6 years, but less than 8 years
5. 8 years, but less than 10 years
6. 10 years or more

62. What was the source of your commission?

1. OTS (Officer Training School)
2. ROTC (Reserve Officer Training Corps)
3. US Air Force Academy
4. Other service academy (Army, Navy, etc.)

63. I was assigned or had orders to a base supply position (select one)

1. When I attended the basic supply course
2. On my next assignment
3. Two assignments after attendance
4. Three assignments after attendance
5. Four assignments after attendance
6. Five or more assignments after attendance
7. Never assigned to a base supply position

64. What area is your bachelor's degree in?

1. Engineering
2. Chemical Engineering
3. Petroleum Engineering
4. Industrial Management
5. Accounting
6. Business Administration
7. Liberal Arts (art, music, philosophy, history, etc.)
8. Physical Sciences (chemistry, physics, math, etc.)
9. Natural Sciences (biology, zoology, premed, etc.)
10. Other _____

65. What area is your master's degree in?

1. I do not have a master's degree
2. Business Admin/Public Admin/Management/Economics
3. Logistics
4. Education/Guidance Counseling
5. Industrial Management/Industrial Engineering
6. Petroleum Engineering/Chemical Engineering
7. Computer Science
8. Liberal Arts
9. Physical Sciences/Natural Sciences
10. Other _____

66. What area is your doctoral degree in?

1. I do not have a doctoral degree
2. My degree is in _____

67. What command level are you presently assigned to?

1. Squadron
2. Major Command
3. Wing/Base
4. HQ USAF
5. Joint/Combined Staff
6. Air Division
7. Separate Operating Agency
8. Numbered AF
9. Other _____

68. Which of the following statements best describes your entry into the supply career field?

1. Assigned primarily to supply since commissioning
2. Retrained into supply from another AFSC
3. Assigned to supply to career-broaden (non-rated)
4. Assigned to supply to career-broaden (rated)
5. Rated supplement to the supply career field
6. Other _____

YOUR COMMENTS:

Appendix E: Supply Operations Officer

Course Outline

Supply Training Branch
Lowry Air Force Base, Colorado

HO G30BR6421 001-I-1
March 1980

COURSE OUTLINE

<u>BLOCK AND LESSON</u>	<u>MAXIMUM TIME TO COMPLETE (HOURS)</u>
I. Wholesale/Retail Supply Operations	
1. Course Introduction and Orientation	1
2. Overview of the Supply System	1
3. Supply Policymaking Organizations	1
4. Wholesale Supply Operations	2
5. Technical Orders and Supply Cataloging	10
6. Retail Supply Operation	8
7. UNIVAC 1050-II Computer System	2
8. Satellite Supply Management Operations	1
9. File Maintenance Activities	4
10. Written Test and Critiques	<u>2</u>
Total classroom hours	32
II. Materiel Support Procedures	
1. Issue Procedures	6
2. Mission Capability (MICAP) Management	7
3. Repair Cycle	10
4. Supply Point	2
5. Bench Stock	5
6. Written Test and Critique	<u>2</u>
Total classroom hours	32
III. Materiel Management	
1. Post-Post Procedures	3
2. Stock Level Procedures	6
3. Due-out Validation	2
4. Requisition Procedures	8
5. Base Redistributable Materiel	6
6. War Reserve Materiel (WRM)	5
7. Written Test and Critique	<u>2</u>
Total classroom hours	32

Supersedes HO G30BR6421-I-1, August 1978

<u>BLOCK AND LESSON</u>	<u>MAXIMUM TIME TO COMPLETE (HOURS)</u>
IV. Customer Support and Storage	
1. Equipment Allowances and Authorization	10
2. Retail Outlets	4
3. Receiving Procedures	9
4. Storage Procedures	2
5. Inspection Procedures	3
6. Delivery Procedures	2
7. Written Test and Critique	<u>2</u>
Total classroom hours	32
V. Supply Systems/Management	
1. Inventory Procedures	4
2. Document Control Procedures	8
3. File Interrogation System	4
4. Management and Procedures	14
5. Written Test and Critique	<u>2</u>
Total classroom hours	32
VI. Special Subjects	
1. Materiel Control Responsibilities	3
2. Base Fuels Management	3
3. Base Munitions Management	2
4. Engine Management	2
5. Civilian Personnel Management	4
6. USAF Security Program	3
7. USAF Graduate Evaluation Program	1
8. Written Test and Critique	2
9. Course Critique and Graduation	1
10. End of Course Appointments	<u>3</u>
Total classroom hours	24

Appendix F: Supply Systems Management Reports
and Listings Course Outline

Supply Training Branch
Lowry Air Force Base, Colorado

HO G30ZR6424 001-I-1
July 1982

COURSE OUTLINE

<u>Lesson</u>	<u>Title</u>	<u>Max Time Class Hours</u>
1	Orientation	2
2	UNIVAC 1050-II System	
	a. SBSS Organization Structure	1
	b. Analyze computer scheduling	2
	c. Analyze internal records	5
	d. Analyze delinquent document and reject control procedures	1
	e. Analyze inventory procedures	2
	f. Analyze SBSS management products	1
	Total	<u>12</u>
3	Customer Support	
	a. Analyze demand processing procedures and issuing systems	2
	b. Analyze repair cycle management procedures and products	7
	c. Analyze bench stock management procedures and products	3
	d. Analyze retail outlet management procedures	2
	e. Analyze allowance and authorization management procedures and products	7
	Total	<u>21</u>
4	Materiel Management	
	a. Analyze requirement procedures	6
	b. Analyze requisition procedures and management products	12
	Total	<u>18</u>
5	Financial Management	
	a. Principles of the Air Force Stock Fund	4
	b. Analyze stock fund management products	6
	Total	<u>10</u>

Supersedes HO G30ZR6424 001-I-1, August 1978

6	SBSS Management Analysis	
	a. Analyze selected inquiries	10
	b. Analyze selected transaction/ document registers	10
	c. Analyze M32 report	<u>16</u>
	TOTAL	36
7	USAF Graduate Evaluation Program	1

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014112546356342121160605260551	33202001441300013033300250100550241020
04200110346346205062001	022000242203330212222000001221000021080020
0622222455555533001411	021222433033220100121021101001000000050020
06311211153326443024551	035124034143332142133144321000000001050000
04222233555443333662551	000346453543433354643464451220100530161010
05235253326545542022311	051102001012312201022110101000000001050020
0422211155545322502313001511	4422614040554330001241141211100021060070
06111111111111222211211	0233222222222222222222221111000011080021
016466545353544254465400511	2112222122231602001000001241 00041080020
064243354555235241063601320511	53322144433103123322211000000650050020

iii

112

006	250101110163 21
04324334456444333033 31 4 1	12210003400 0000
02311132334344523015501 033132343122332201122121001240000041260020	
02234523333432403005520333035160664600020030000000001230000031060000	
00000000166620636006600006 36333302030000000000003430 251000050060020	
04222222645443330002261 042212623133633311011030001220100020031000	
02224412546261334016430215060345405146333621254051101231100210062050	
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05032221533535532014411 30212213232322323133233312110100 0230050 20	
04000001000001023236111 0000011010000000000000000001120000620070001	
1 0331 2	220000550190045
0222222222222222121221 1	241 000 166 000
0011111244444344041420143021110101012113322221101101250101050051020	
03111111333333151625251 1	220100340082040
0600000333333036036031 1	1000000001060000
0411112621222151443111 1	111100441051020
02000111554462254136120211021140210106336512123101001240000031050010	
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014666666666665000505005064511115116666641142032441250100350253070	
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06000211566554123555101 03222323002221200000010001100100401051020	
034243254654664342545215 1	231000031680010
1 2411 2	220000120060020
065555556666666000044012 0 2225525053424403244012221001000400050600	
04353325324251551554661 012123644026544403333241140120000020060001	
1 3401 2	221000210 60040
0400000066666066660061 0000000600000000000000000001220100020051000	
0255555533333055456130024113313135253333313233222321240100140161010	
0 1130225122212233311231122123211111241101040051080	
04363634365352433613421 020314444233442210002240221111000011060020	
0 14101412	220100350161001
1 2361 2	220100450551020
05250114143331654605201 050151101335100130423140531111000011050020	
0411111133333644130510131021111113113123311113121101221000010060020	
1 44303562	221000340160000
03000000666666333003301 031231333003234200000002001230000031060050	
05113233445555423122331 000001100011011101110002101110001440650040	
03342634314516450146461 2	240100650251010
04654444222336241041421 024444 44344343314424221221220000230260020	
060000004544456352 3661 055212513141220312121201100110100640051001	
05024205665332426106201 023130535050041100045020021230000011060001	
06101012335363154004601 010402102012000102022010020000000221060020	

04335445455555220024101500331123343323222011101111 220100620091000
05111112555553646403410331053111555222330000011011021110000011060000
0555555666666651000660205000001323002300000003010000110000340050000
04452010353545131014021 032134463233323113122220010220000020650000
050535 0000000066666001 1 110000011050000
0532222333333333061601 1 01000060005 20
020000003333530450451300151 240000041050040
04101123155341534153361 033441312121123122222213211220000550151020
05111111333335156265111 0 0 00 00000 230001012060001
0 3651 2 220000550650015
06333236033665660005601 0310235252401121002120211000010004 1660000
1 2561 2 250101650 51000
03312423343430512011521 001323113002231103112130100231100230099020
0432233344543423501420031506212351102334230212231001021110001108
1 61601162 220100650 51010
01223555444444555113600456066465666556666543333564440250100150361 20
1 0050216100231433110110001031130001220000350050080
1 64606402 230000340650040
051101000000006550026010 00000421110020000000000000000000001050020
05222252666666536606331 00000000000000000000000000000000001110001530060020
06001122656664116144020060011110001001110000000000001000000000050020
051101000000006550026010 00000421110020000000000000000000001050020
06411122222333153665111 1 001000601090000
06212036143362423641321 060240304156021301120010001000000441050000
0422222222222314003521 1 12000 130000000
01222335535343165153431 0323223331332333333333233321250000051360040
03312221354632234012201 1 221100021130020
0312222622226400006001 000000606000066000062000001111000011090020
062222252223265 661601 001000600050000
06000000433333133553231 03333133323333333333333333331000100620651000
02211234524523105415420450021232312134423342122342411240100041061020
0622633233533242254341 110000611051000
05111111666666552005600550021010111111111100011000001111060310060000
022222253566225130015101312 1240000041060020
0400001136641153601221013 015032035003534002122061000221000021050020

Appendix H: Frequencies Program, Demographic

Questions

RANK CODE	INDIVIDUALS	RANK
1.	***** (89)	
	1 SECOND LT	
2.	***** (90)	
	1 FIRST LT	
3.	***** (299)	
	1 CAPTAIN	
4.	** (6)	
	1 MAJOR	
0.	* (1)	
(MISSING)	1	
	1.....1.....1.....1.....1.....1	
	0 100 200 300 400 500	
	FREQUENCY	
MEAN	2.459	MEDIAN 2.711
		MODE 3.000
VALID CASES	484	MISSING CASES 1

CODE

116

```

SEX      THE RESPONDENTS SEX
CODE
1. ***** ( 359)
1 MALE
1
1
2. ***** ( 123)
1 FEMALE
1
1
0. * ( 3)
(MISSING) 1 NO REPLY
1
1.....1.....1.....1.....1.....1
0      100      200      300      400      500
FREQUENCY

MEAN      1.255      MEDIAN      1.171      MODE      1.000
VALID CASES      482      MISSING CASES      3

```


ENLSEK PRIORITY ENLISTED SERVICE
CODE

```

1. ***** ( 223)
I NONE
I
I
I
2. *** ( 21)
I LESS THAN 2
I
I
I
3. **** ( 32)
I 2 TO 4
I
I
I
4. ***** ( 37)
I 4 TO 6
I
I
I
5. ***** ( 38)
I 6 TO 8
I
I
I
6. ***** ( 41)
I 8 TO 10
I
I
I
7. ***** ( 92)
I 10 PLUS
I
I
I
0. * ( 1)
(MISSING) I
I
I.....I.....I.....I.....I.....I.....I
0 100 200 300 400 500
FREQUENCY

MEAN 3.283 MEDIAN 2.405 MODE 1.000
VALID CASES 484 MISSING CASES 1

```

COMSOR SOURCE OF COMMISSION
CODE

	I				
1.	***** (275)				
	I OTS				
	I				
	I				
2.	***** (201)				
	I ROTC				
	I				
	I				
3.	* (4)				
	I ACAD				
	I				
	I				
4.	* (1)				
	I OTHER				
	I				
	I				
0.	* (4)				
(MISSING)	I				
	I				
	I.....I.....I.....I.....I				
	0 100 200 300 400 500				
	FREQUENCY				
MEAN	1.441	MEDIAN	1.375	MODE	1.000
VALID CASES	481	MISSING CASES	4		

CMDLEV ASSIGNED TO COMMAND LEVEL
CODE

```

1. ***** ( 141)
   I SQUADRON
   I
   I
2. ***** ( 90)
   I MAJCOM
   I
   I
3. ***** ( 159)
   I WING-BASE
   I
   I
4. ** ( 3)
   I HQ USAF
   I
   I
5. ***** ( 14)
   I JOINT-COMBINED
   I
   I
6. *** ( 6)
   I AIR DIVISION
   I
   I
7. *** ( 7)
   I SEPARATE AGENCY
   I
   I
8. ***** ( 26)
   I NUMBERED AF
   I
   I
9. ***** ( 18)
   I OTHER
   I
   I
0. ***** ( 21)
(MISSING) I
          I
          I.....I.....I.....I.....I.....I.....I
          0          40          80          120          160          200
          FREQUENCY

```

MEAN 2.877 MEDIAN 2.506 MODE 3.000

VALID CASES 464 MISSING CASES 21

I

MEAN	1.413	MEDIAN	1.346	MODE	1.000
------	-------	--------	-------	------	-------

VALID CASES 479 MISSING CASES 6

BACHDG AREA OF BACHELORS DEGREE
CODE

```

1. * ( 1)
I ENGINEERING
I
I
2. * ( 1)
I CHEMICAL ENG
I
I
4. ** ( 11)
I INDUST MGMT
I
I
5. ** ( 14)
I ACCOUNTING
I
I
6. ***** ( 207)
I BUSINESS
I
I
7. ***** ( 161)
I LIBERAL ARTS
I
I
8. ** ( 9)
I PHYSICAL SCIENCE
I
I
9. **** ( 25)
I NATURAL SCE
I
I
10. ***** ( 39)
I OTHER
I
I
0. *** ( 17)
(MISSING) I
I
I.....I.....I.....I.....I.....I.....I
0      100      200      300      400      500
FREQUENCY

MEAN      6.780      MEDIAN      6.500      MODE      6.000

VALID CASES      468      MISSING CASES      17

```

MASTDG AREA OF MASTERS DEGREE
CODE

```

      I
1. ***** ( 265)
      I NONE
      I
      I
2. ***** ( 116)
      I MGMT-ECON-BUSINESS
      I
      I
3. ***** ( 39)
      I LOGISTICS
      I
      I
4. *** ( 17)
      I EDUCATION-COUNSELING
      I
      I
5. * ( 4)
      I INDUST MGMT-ENG
      I
      I
6. * ( 1)
      I PETRO-CHEM ENG
      I
      I
8. ** ( 12)
      I LIBERAL ARTS
      I
      I
9. * ( 1)
      I PHY-NAT SCIENCES
      I
      I
10. ** ( 9)
      I OTHER
      I
      I
0. *** ( 21)
(MISSING) I
      I
      I.....I.....I.....I.....I.....I.....I
      0          100        200        300        400        500
      FREQUENCY

MEAN      1.946      MEDIAN      1.375      MODE      1.000

VALID CASES      464      MISSING CASES      21

```

DOCTDG AREA OF DOCTORAL DEGREE
CODE

```

      1. ***** ( 461)
      1 NO
      1
      1
      2. * ( 2)
      1 YES
      1
      1
      0. *** ( 22)
(MISSING) 1
          1
          1.....1.....1.....1.....1.....1
          0      100      200      300      400      500
          FREQUENCY

```

MEAN 1.004 MEDIAN 1.002 MODE 1.000

VALID CASES 463 MISSING CASES 22

QUES1 DID RESPONDENT ATTEND 6421 COURSE

CODE

```

      I
1. ***** ( 421)
      I YES
      I
      I
2. ***** ( 62)
      I NO
      I
      I
0. * ( 2)
(MISSING) I NO REPLY
      I
      I.....I.....I.....I.....I.....I
      0      100      200      300      400      500
      FREQUENCY

```

MEAN 1.128 MEDIAN 1.074 MODE 1.000

VALID CASES 483 MISSING CASES 2

QUES2 YEAR GROUP ATTENDED 6421

CODE

	I				
1.	***** (15)				
	I PRIOR TO 1973				
	I				
	I				
2.	***** (40)				
	I 1973 THRU 1974				
	I				
	I				
3.	***** (44)				
	I 1975 THRU 1976				
	I				
	I				
4.	***** (58)				
	I 1977 THRU 1978				
	I				
	I				
5.	***** (108)				
	I 1979 THRU 1980				
	I				
	I				
6.	***** (78)				
	I 1981 THRU 1982				
	I				
	I				
7.	***** (78)				
	I 1983 THRU 1984				
	I				
	I				
0.	***** (64)				
(MISSING)	I NO REPLY				
	I				
	I.....I.....I.....I.....I.....I.....I				
	0 40 80 120 160 200				
	FREQUENCY				
MEAN	4.781	MEDIAN	4.995	MODE	5.000
VALID CASES	421	MISSING CASES	64		

ASSNBS WHEN ASSIGNED TO BASE SUPPLY
CODE

```

      I
1. ***** ( 337)
      I SIMULT
      I
      I
2. ***** ( 59)
      I NEXT
      I
      I
3. *** ( 20)
      I TWO
      I
      I
4. ** ( 7)
      I THREE
      I
      I
5. * ( 2)
      I FOUR
      I
      I
6. * ( 3)
      I FIVE
      I
      I
7. ***** ( 43)
      I NEVER
      I
      I
0. ** ( 14)
(MISSING) I
      I
      I .....I .....I .....I .....I .....I
      0          100          200          300          400          500
      FREQUENCY

MEAN          1.851      MEDIAN          1.199      MODE          1.000

VALID CASES   471      MISSING CASES   14

```

QUES23 DID YOU ATTEND THE 6424 COURSE

CODE

1. ***** (146)
 1 YES
 1
 1
 2. ***** (334)
 1 NO
 1
 1

0. ** (5)
 (MISSING) 1 NO REPLY

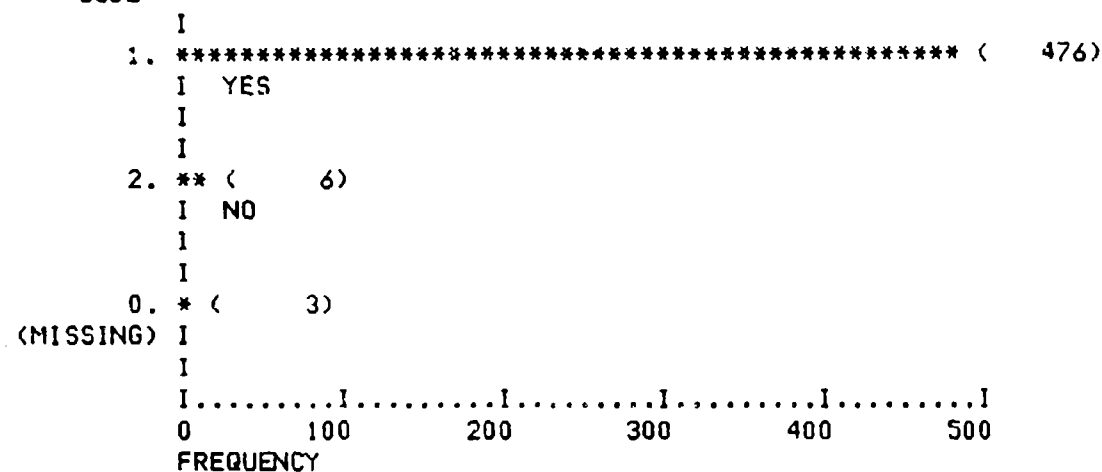
1.....1.....1.....1.....1.....1.....1
 0 100 200 300 400 500
 FREQUENCY

MEAN 1.696 MEDIAN 1.781 MODE 2.000

VALID CASES 480 MISSING CASES 5

PAFSC PRIMARY AFSC IS 64XX

CODE

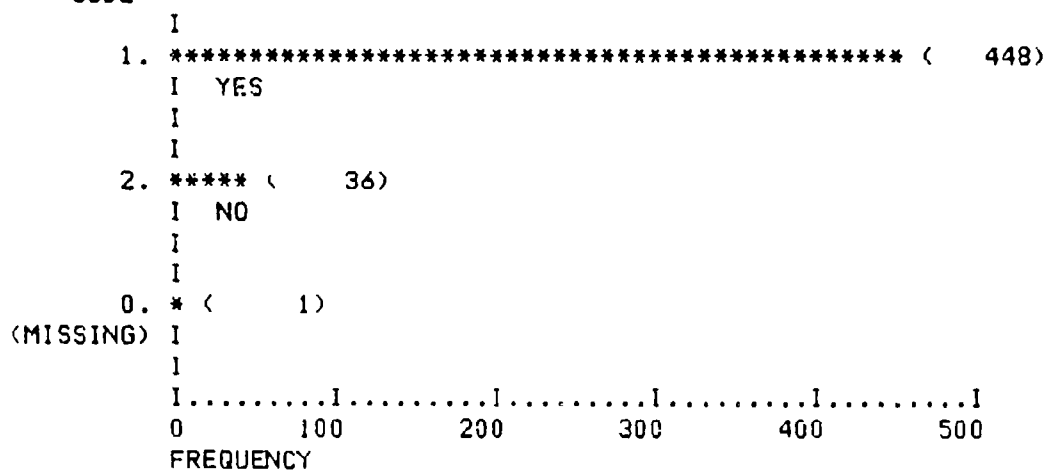


MEAN 1.012 MEDIAN 1.006 MODE 1.000

VALID CASES 482 MISSING CASES 3

DAFSC DUTY AFSC IS 64XX

CODE



MEAN 1.074 MEDIAN 1.040 MODE 1.000

VALID CASES 484 MISSING CASES 1

ENTRY ENTERED SUPPLY CAREER FIELD
CODE

	1				
1.	***** (406)				
	I SINCE COMM				
	I				
	I				
2.	***** (38)				
	I RETAINED				
	I				
	I				
3.	** (5)				
	I CAREERBROAD NONRAT				
	I				
	I				
4.	* (1)				
	I CAREER-BROAD RAT				
	I				
	I				
6.	*** (18)				
	I OTHER				
	I				
	I				
0.	*** (17)				
(MISSING)	I				
	I				
	I.....I.....I.....I.....I.....I				
	0 100 200 300 400 500				
	FREQUENCY				
MEAN	1.301	MEDIAN	1.076	MODE	1.000
VALID CASES	468	MISSING CASES	17		

SUEXP
CODE

```

1. ***** ( 94)
I LESS THAN 2
I
I
2. ***** ( 77)
I 2 TO 4
I
I
3. ***** ( 79)
I 4 TO 6
I
I
4. ***** ( 59)
I 6 TO 8
I
I
5. ***** ( 58)
I 8 TO 10
I
I
6. ***** ( 115)
I 10 PLUS
I
I
0. ** ( 3)
(MISSING) I
I
I.....I.....I.....I.....I.....I.....I
0          40          80          120          160          200
FREQUENCY

MEAN      3.529      MEDIAN    3.386      MODE      6.000
VALID CASES 482      MISSING CASES 3

```

Appendix I: Frequencies Program, Opinion Questions

QUES3 TRAINING ON WHOLESALE-RETAIL SUPPLY WAS
CODE

```

      I
1. ***** (    55)
      I VERY USEFUL
      I
      I
2. ***** (    81)
      I USEFUL
      I
      I
3. ***** (   116)
      I SLIGHTLY USEFUL
      I
      I
4. ***** (    74)
      I NEUTRAL
      I
      I
5. ***** (    49)
      I SLIGHTLY USELESS
      I
      I
6. ***** (    27)
      I USELESS
      I
      I
7. ***** (    18)
      I VERY USELESS
      I
      I
0. ***** (    65)
(MISSING) I NO REPLY
      I
      I.....I.....I.....I.....I.....I.....I
      0          40          80          120          160          200
      FREQUENCY

MEAN      3.319      MEDIAN      3.138      MODE      3.000

VALID CASES      420      MISSING CASES      65

```

QUES4 TRAINING ON MATERIEL SUPPORT WAS
CODE

	I				
1.	***** (89)				
	I VERY USEFUL				
	I				
	I				
2.	***** (108)				
	I USEFUL				
	I				
	I				
3.	***** (91)				
	I SLIGHTLY USEFUL				
	I				
	I				
4.	***** (50)				
	I NEUTRAL				
	I				
	I				
5.	***** (36)				
	I SLIGHTLY USELESS				
	I				
	I				
6.	***** (30)				
	I USELESS				
	I				
	I				
7.	***** (15)				
	I VERY USELESS				
	I				
	I				
0.	***** (66)				
(MISSING)	I NO REPLY				
	I				
	I.....I.....I.....I.....I.....I.....I				
	0 40 80 120 160 200				
	FREQUENCY				
MEAN	2.967	MEDIAN	2.637	MODE	2.000
VALID CASES	419	MISSING CASES	66		

QUEST TRAINING ON MATERIEL MANAGEMENT WAS
CODE

```

1. ***** ( 71)
I VERY USEFUL
I
I
2. ***** ( 87)
I USEFUL
I
I
3. ***** ( 91)
I SLIGHTLY USEFUL
I
I
4. ***** ( 59)
I NEUTRAL
I
I
5. ***** ( 54)
I SLIGHTLY USELESS
I
I
6. ***** ( 38)
I USELESS
I
I
7. ***** ( 21)
I VERY USELESS
I
I
0. ***** ( 64)
(MISSING) I NO REPLY
I
I.....I.....I.....I.....I.....I
0          20          40          60          80          100
FREQUENCY

```

MEAN	3.323	MEDIAN	3.077	MODE	3.000
VALID CASES	421	MISSING CASES	64		

```

I
1. ***** (    52)
   I VERY USEFUL
   I
   I
2. ***** (    107)
   I USEFUL
   I
   I
3. ***** (    106)
   I SLIGHTLY USEFUL
   I
   I
4. ***** (    58)
   I NEUTRAL
   I
   I
5. ***** (    45)
   I SLIGHTLY USELESS
   I
   I
6. ***** (    29)
   I USELESS
   I
   I
7. ***** (    23)
   I VERY USELESS
   I
   I
0. ***** (    65)
(MISSING) I NO REPLY
          I
          I.....I.....I.....I.....I.....I.....I.....I.....I.....I
          0         40        80       120      160       200
          FREQUENCY

MEAN           3.276             MEDIAN           2.981             MODE           2.000

VALID CASES     420             MISSING CASES     65

```

QUES7 TRAINING ON SUPPLY SYSTEMS WAS
CODE

	I				
1.	***** (53)				
	I VERY USEFUL				
	I				
	I				
2.	***** (72)				
	I USEFUL				
	I				
	I				
3.	***** (101)				
	I SLIGHTLY USEFUL				
	I				
	I				
4.	***** (73)				
	I NEUTRAL				
	I				
	I				
5.	***** (57)				
	I SLIGHTLY USELESS				
	I				
	I				
6.	***** (39)				
	I USELESS				
	I				
	I				
7.	***** (24)				
	I VERY USELESS				
	I				
	I				
0.	***** (66)				
(MISSING)	I NO REPLY				
	I				
	I.....I.....I.....I.....I.....I.....I				
	0 40 80 120 160 200				
	FREQUENCY				
MEAN	3.530	MEDIAN	3.337	MODE	3.000
VALID CASES	419	MISSING CASES	66		

QUES8 TRAINING ON SPECIAL SUBJECTS WAS

CODE

	I				
1.	***** (46)				
	I VERY USEFUL				
	I				
	I				
2.	***** (52)				
	I USEFUL				
	I				
	I				
3.	***** (72)				
	I SLIGHTLY USEFUL				
	I				
	I				
4.	***** (81)				
	I NEUTRAL				
	I				
	I				
5.	***** (60)				
	I SLIGHTLY USELESS				
	I				
	I				
6.	***** (56)				
	I USELESS				
	I				
	I				
7.	***** (53)				
	I VERY USELESS				
	I				
	I				
0.	***** (65)				
(MISSING)	I NO REPLY				
	I				
	I.....I.....I.....I.....I.....I.....I				
	0 20 40 60 80 100				
	FREQUENCY				
MEAN	4.040	MEDIAN	3.994	MODE	4.000
VALID CASES	420	MISSING CASES	65		

QUES9 COVERAGE OF WHOLESALE-RETAIL SUPPLY WAS

CODE

	I				
1.	***** (22)				
	I NEEDED LESS				
	I				
	I				
2.	***** (23)				
	I DELETE SOME				
	I				
	I				
3.	***** (42)				
	I SLIGHTLY OVERCOVERED				
	I				
	I				
4.	***** (124)				
	I ADEQUATE				
	I				
	I				
5.	***** (65)				
	I SLIGHTLY UNDERCOVERED				
	I				
	I				
6.	***** (72)				
	I ADD SOME				
	I				
	I				
7.	***** (67)				
	I NEEDED MORE				
	I				
	I				
0.	***** (70)				
(MISSING)	I NO REPLY				
	I				
	I.....I.....I.....I.....I.....I.....I				
	0 40 80 120 160 200				
	FREQUENCY				
MEAN	4.617	MEDIAN	4.472	MODE	4.000
VALID CASES	415	MISSING CASES	70		

QUES10 COVERAGE OF MATERIEL SUPPORT WAS
CODE

```

I
1. ***** ( 14)
I   NEEDED LESS
I
I
2. ***** ( 10)
I   DELETE SOME
I
I
3. ***** ( 34)
I   SLIGHTLY OVERCOVERED
I
I
4. ***** ( 92)
I   ADEQUATE
I
I
5. ***** ( 86)
I   SLIGHTLY UNDERCOVERED
I
I
6. ***** ( 96)
I   ADD SOME
I
I
7. ***** ( 85)
I   NEEDED MORE
I
I
0. ***** ( 68)
(MISSING) I NO REPLY
I
I.....I.....I.....I.....I.....I
0      20      40      60      80      100
FREQUENCY

```

MEAN	5.048	MEDIAN	5.180	MODE	6.000
VALID CASES	417	MISSING CASES	68		

QUES11 COVERAGE OF MATERIEL MANAGEMENT WAS
CODE

	1				
1.	**** (12)				
	1 NEEDED LESS				
	1				
	1				
2.	*** (9)				
	1 DELETE SOME				
	1				
	1				
3.	***** (29)				
	1 SLIGHTLY OVERCOVERED				
	1				
	1				
4.	***** (88)				
	1 ADEQUATE				
	1				
	1				
5.	***** (78)				
	1 SLIGHTLY UNDERCOVERED				
	1				
	1				
6.	***** (103)				
	1 ADD SOME				
	1				
	1				
7.	***** (97)				
	1 NEEDED MORE				
	1				
	1				
0.	***** (69)				
(MISSING)	1 NO REPLY				
	1				
	1.....1.....1.....1.....1.....1				
	0 40 80 120 160 200				
	FREQUENCY				
MEAN	5.183	MEDIAN	5.397	MODE	6.000
VALID CASES	416	MISSING CASES	69		

```

1. **** ( 13)
I   NEEDED LESS
I
I
2. ***** ( 17)
I   DELETE SOME
I
I
3. ***** ( 26)
I   SLIGHTLY OVERCOVERED
I
I
4. ***** ( 120)
I   ADEQUATE
I
I
5. ***** ( 93)
I   SLIGHTLY UNDERCOVERED
I
I
6. ***** ( 71)
I   ADD SOME
I
I
7. ***** ( 85)
I   NEEDED MORE
I
I
8. ***** ( 70)
(MISSING) I NO REPLY
I
I.....I.....I.....I.....I.....I.....I.....I.....I.....I
0          40          80          120          160          200
FREQUENCY

MEAN      4.918      MEDIAN      4.880      MODE      4.000

VALID CASES      415      MISSING CASES      70

```


QUES13 COVERAGE OF SUPPLY SYSTEMS WAS
CODE

```

1. ***** ( 16)
I   NEEDED LESS
I
I
2. ***** ( 17)
I   DELETE SOME
I
I
3. ***** ( 39)
I   SLIGHTLY OVERCOVERED
I
I
4. ***** ( 118)
I   ADEQUATE
I
I
5. ***** ( 89)
I   SLIGHTLY UNDERCOVERED
I
I
6. ***** ( 70)
I   ADD SOME
I
I
7. ***** ( 68)
I   NEEDED MORE
I
I
0. ***** ( 68)
(MISSING) I NO REPLY
I
I.....I.....I.....I.....I.....I.....I.....I.....I
0          40          80          120          160          200
FREQUENCY

MEAN      4.748      MEDIAN      4.708      MODE      4.000

VALID CASES      417      MISSING CASES      68

```

QUES14 COVERAGE OF SPECIAL SUBJECTS WAS

CODE

```

      I
1. ***** (    22)
      I  NEEDED LESS
      I
      I
2. ***** (    30)
      I  DELETE SOME
      I
      I
3. ***** (    55)
      I  SLIGHTLY OVERCOVERED
      I
      I
4. ***** (   113)
      I  ADEQUATE
      I
      I
5. ***** (    61)
      I  SLIGHTLY UNDERCOVERED
      I
      I
6. ***** (    51)
      I  ADD SOME
      I
      I
7. ***** (    84)
      I  NEEDED MORE
      I
      I
0. ***** (    69)
(MISSING) I  NO REPLY
          I
          I.....I.....I.....I.....I.....I.....I
          0         40        80       120       160       200
          FREQUENCY

MEAN      4.563      MEDIAN    4.394      MODE      4.000

VALID CASES    416      MISSING CASES    69
  
```

QUES15 6421 ADEQUATELY PREPARES SUPPLY OFF.

CODE

```

      I
1. ***** ( 22)
      I STRONGLY AGREE
      I
      I
2. ***** ( 76)
      I AGREE
      I
      I
3. ***** ( 43)
      I BARELY AGREE
      I
      I
4. ***** ( 38)
      I NEUTRAL
      I
      I
5. ***** ( 78)
      I BARELY DISAGREE
      I
      I
6. ***** ( 83)
      I DISAGREE
      I
      I
7. ***** ( 80)
      I STRONGLY DISAGREE
      I
      I
0. ***** ( 65)
(MISSING) I NO REPLY
      I
      I.....I.....I.....I.....I.....I
      0          20          40          60          80          100
      FREQUENCY
  
```

MEAN 4.531 MEDIAN 4.897 MODE 6.000

VALID CASES 420 MISSING CASES 65

QUES16 6421 CONTAINS TOO MUCH THEORY

CODE

```

1. ***** ( 21)
1 STRONGLY AGREE
1
1
2. ***** ( 39)
1 AGREE
1
1
3. ***** ( 61)
1 BARELY AGREE
1
1
4. ***** ( 130)
1 NEUTRAL
1
1
5. ***** ( 66)
1 BARELY DISAGREE
1
1
6. ***** ( 61)
1 DISAGREE
1
1
7. ***** ( 40)
1 STRONGLY DISAGREE
1
1
0. ***** ( 67)
(MISSING) 1 NO REPLY
1
1.....1.....1.....1.....1.....1.....1
0          40          80          120          160          200
FREQUENCY

```

MEAN 4.254 MEDIAN 4.177 MODE 4.000

VALID CASES 418 MISSING CASES 67

QUES17 6421 APPLIES LITTLE AFTER TWO ASSIGNMENT
CODE

```

1. ***** ( 51)
I STRONGLY AGREE
I
I
2. ***** ( 39)
I AGREE
I
I
3. ***** ( 51)
I BARELY AGREE
I
I
4. ***** ( 118)
I NEUTRAL
I
I
5. ***** ( 46)
I BARELY DISAGREE
I
I
6. ***** ( 60)
I DISAGREE
I
I
7. ***** ( 53)
I STRONGLY DISAGREE
I
I
0. ***** ( 67)
(MISSING) I NO REPLY
I
I.....I.....I.....I.....I.....I.....I
0          40          80          120          160          200
FREQUENCY

MEAN      4.103      MEDIAN      4.076      MODE      4.000
VALID CASES      418      MISSING CASES      67

```

QUES18 DUTY ASSIGN FIRST, GIVE SCHOOL LATER
CODE

```

      I
1. ***** ( 236)
      I STRONGLY AGREE
      I
      I
2. ***** ( 48)
      I AGREE
      I
      I
3. *** ( 21)
      I BARELY AGREE
      I
      I
4. *** ( 20)
      I NEUTRAL
      I
      I
5. *** ( 17)
      I BARELY DISAGREE
      I
      I
6. *** ( 24)
      I DISAGREE
      I
      I
7. ***** ( 55)
      I STRONGLY DISAGREE
      I
      I
8. ***** ( 64)
(MISSING) I NO REPLY
      I
      I.....I.....I.....I.....I.....I.....I
      0      100      200      300      400      500
      FREQUENCY

MEAN      2.587      MEDIAN      1.392      MODE      1.000

VALID CASES      421      MISSING CASES      64

```

```

1. ***** ( 133)
I STRONGLY AGREE
I
I
2. ***** ( 65)
I AGREE
I
I
3. ***** ( 51)
I BARELY AGREE
I
I
4. ***** ( 52)
I NEUTRAL
I
I
5. ***** ( 41)
I BARELY DISAGREE
I
I
6. ***** ( 40)
I DISAGREE
I
I
7. ***** ( 37)
I STRONGLY DISAGREE
I
I
8. ***** ( 66)
(MISSING) I NO REPLY
I
I.....I.....I.....I.....I.....I.....I.....I.....I
0 40 80 120 160 200
FREQUENCY

MEAN 3.169 MEDIAN 2.725 MODE 1.000
VALID CASES 419 MISSING CASES 66

```

QUES20 QJT IS BETTER THAN FORMAL TRAINING

CODE

```

1. ***** ( 67)
   I  STRONGLY AGREE
   I
   I
2. ***** ( 88)
   I  AGREE
   I
   I
3. ***** ( 65)
   I  BARELY AGREE
   I
   I
4. ***** ( 67)
   I  NEUTRAL
   I
   I
5. ***** ( 63)
   I  BARELY DISAGREE
   I
   I
6. ***** ( 58)
   I  DISAGREE
   I
   I
7. ***** ( 77)
   I  STRONGLY DISAGREE
   I
   I.....I.....I.....I.....I.....I.....I
   0          20          40          60          80          100
FREQUENCY

```

MEAN 3.934 MEDIAN 3.836 MODE 2.000

VALID CASES 485 MISSING CASES 0

QUES21 I'M SATISFIED WITH SUPPLY TRAINING REC
CODE

```

      I
1. ***** ( 43)
   I  STRONGLY AGREE
   I
   I
2. ***** ( 64)
   I  AGREE
   I
   I
3. ***** ( 68)
   I  BARELY AGREE
   I
   I
4. ***** ( 65)
   I  NEUTRAL
   I
   I
5. ***** ( 83)
   I  BARELY DISAGREE
   I
   I
6. ***** ( 71)
   I  DISAGREE
   I
   I
7. ***** ( 86)
   I  STRONGLY DISAGREE
   I
   I
0. **** ( 5)
(MISSING) I NO REPLY
      I
      I.....I.....I.....I.....I.....I
      0          20          40          60          80          100
      FREQUENCY

MEAN      4.329      MEDIAN      4.500      MODE      7.000

VALID CASES      480      MISSING CASES      5

```

QUES22 MY WEAKNESSES ARE IN TECHNICAL KNOWLEDGE
CODE

1.	***** (133)				
	I STRONGLY AGREE				
2.	***** (116)				
	I AGREE				
3.	***** (75)				
	I BARELY AGREE				
4.	***** (53)				
	I NEUTRAL				
5.	***** (21)				
	I BARELY DISAGREE				
6.	***** (32)				
	I DISAGREE				
7.	***** (54)				
	I STRONGLY DISAGREE				
0. *	(1)				
(MISSING)	I NO REPLY				
	I				
	I.....I.....I.....I.....I.....I				
	0 40 80 120 160 200				
	FREQUENCY				
MEAN	3.052	MEDIAN	2.440	MODE	1.000
VALID CASES	484	MISSING CASES	1		

```

I
1. ***** (    54)
   I STRONGLY AGREE
   I
   I
2. ***** (    41)
   I AGREE
   I
   I
3. **** (    31)
   I BARELY AGREE
   I
   I
4. *** (    16)
   I NEUTRAL
   I
   I
5. ** (     6)
   I BARELY DISAGREE
   I
   I
6. ** (     8)
   I DISAGREE
   I
   I
7. ** (     5)
   I STRONGLY DISAGREE
   I
   I
0. ***** (    324)
(MISSING) I NO REPLY
          I
          I.....I.....I.....I.....I.....I.....I
          0         100       200       300       400       500
        FREQUENCY

MEAN      2.522      MEDIAN    2.146      MODE      1.000

VALID CASES    161      MISSING CASES    324

```

QUES25 6424 COURSE WAS GIVEN AT PROPER TIME
CODE

```

      I
1. ***** (    36)
      I STRONGLY AGREE
      I
      I
2. **** (    34)
      I AGREE
      I
      I
3. *** (    18)
      I BARELY AGREE
      I
      I
4. *** (    20)
      I NEUTRAL
      I
      I
5. *** (    18)
      I BARELY DISAGREE
      I
      I
6. *** (    17)
      I DISAGREE
      I
      I
7. ** (    9)
      I STRONGLY DISAGREE
      I
      I
0. ***** (    333)
(MISSING) I NO REPLY
      I
      I.....I.....I.....I.....I.....I.....I
      0      100      200      300      400      500
      FREQUENCY

```

MEAN	3.243	MEDIAN	2.833	MODE	1.000
VALID CASES	152	MISSING CASES	333		

QUES26 PREFER THE 6424 COURSE EARLIER
CODE

```

I
1. *** (    22)
I  STRONGLY AGREE
I
I
2. *** (    22)
I  AGREE
I
I
3. ** (    12)
I  BARELY AGREE
I
4. **** (    29)
I  NEUTRAL
I
I
5. *** (    23)
I  BARELY DISAGREE
I
I
6. **** (    26)
I  DISAGREE
I
I
7. *** (    20)
I  STRONGLY DISAGREE
I
I
0. ***** (    331)
(MISSING) I  NO REPLY
I
I.....I.....I.....I.....I.....I.....I
0      100      200      300      40      500
FREQUENCY

MEAN      4.084      MEDIAN      4.224      MODE      4.000

VALID CASES      154      MISSING CASES      331

```

QUES27 SHOULD ANYTHING BE ADDED TO 6421 COURSE

CODE

```

1. ***** ( 328)
1 YES
1
1
2. ***** ( 67)
1 NO
1
1
3. ***** ( 63)
1 UNFAMILIAR
1
1
0. **** ( 27)
(MISSING) 1 NO REPLY
1
1.....1.....1.....1.....1.....1
0      100      200      300      400      500
FREQUENCY

```

MEAN 1.421 MEDIAN 1.198 MODE 1.000

VALID CASES 458 MISSING CASES 27

QUES28 USEFULNESS IF ADDED MORE ON AFM 67-1
CODE

```

I
1. ***** ( 42)
I VERY USEFUL
I
I
2. ***** ( 67)
I USEFUL
I
I
3. ***** ( 83)
I SLIGHTLY USEFUL
I
I
4. ***** ( 68)
I NEUTRAL
I
I
5. ***** ( 33)
I SLIGHTLY USELESS
I
I
6. ***** ( 28)
I USELESS
I
I
7. ***** ( 28)
I VERY USELESS
I
I
0. ***** ( 136)
(MISSING) I NO REPLY
I
I.....I.....I.....I.....I.....I.....I
0          40          80          120          160          200
FREQUENCY

```

MEAN 3.513 MEDIAN 3.289 MODE 3.000

VALID CASES 349 MISSING CASES 136

QUES29 USEFULNESS OF MORE ON COMPUTERS

CODE

```

1. ***** ( 93)
   I  VERY USEFUL
   I
   I
2. ***** ( 91)
   I  USEFUL
   I
   I
3. ***** ( 68)
   I  SLIGHTLY USEFUL
   I
   I
4. ***** ( 43)
   I  NEUTRAL
   I
   I
5. ***** ( 23)
   I  SLIGHTLY USELESS
   I
   I
6. ***** ( 23)
   I  USELESS
   I
   I
7. **** ( 11)
   I  VERY USELESS
   I
   I
0. ***** ( 133)
(MISSING) I  NO REPLY
          I
          I.....I.....I.....I.....I.....I.....I
          0         40        80       120      160      200
          FREQUENCY

```

MEAN 2.787 MEDIAN 2.412 MODE 1.000

VALID CASES 352 MISSING CASES 133


```

I
1. ***** ( 78)
I  VERY USEFUL
I
I
2. ***** ( 91)
I  USEFUL
I
I
3. ***** ( 74)
I  SLIGHTLY USEFUL
I
I
4. ***** ( 64)
I  NEUTRAL
I
I
5. ***** ( 24)
I  SLIGHTLY USELESS
I
I
6. ***** ( 14)
I  USELESS
I
I
7. ** ( 5)
I  VERY USELESS
I
I
0. ***** ( 135)
(MISSING) I  NO REPLY
I
I.....I.....I.....I.....I.....I.....I.....I.....I.....I
0          40          80          120          160          200
FREQUENCY

```

128

QUES31 HOW USEFUL MORE ON REQMTS DETERMINATION
CODE

1.	***** (76)				
	I VERY USEFUL				
	I				
	I				
2.	***** (85)				
	I USEFUL				
	I				
	I				
3.	***** (80)				
	I SLIGHTLY USEFUL				
	I				
	I				
4.	***** (63)				
	I NEUTRAL				
	I				
	I				
5.	***** (24)				
	I SLIGHTLY USELESS				
	I				
	I				
6.	**** (13)				
	I USELESS				
	I				
	I				
7.	**** (10)				
	I VERY USELESS				
	I				
	I				
0.	***** (134)				
(MISSING)	I NO REPLY				
	I				
	I.....I.....I.....I.....I.....I.....I				
	0 40 80 120 160 200				
	FREQUENCY				
MEAN	2.866	MEDIAN	2.681	MODE	2.000
VALID CASES	351	MISSING CASES	134		

QUES32 HOW USEFUL MORE ON USAF STOCK FUND
CODE

```

1. ***** ( 86)
   I VERY USEFUL
   I
   I
2. ***** ( 89)
   I USEFUL
   I
   I
3. ***** ( 82)
   I SLIGHTLY USEFUL
   I
   I
4. ***** ( 40)
   I NEUTRAL
   I
   I
5. ***** ( 30)
   I SLIGHTLY USELESS
   I
   I
6. **** ( 13)
   I USELESS
   I
   I
7. **** ( 13)
   I VERY USELESS
   I
   I
0. ***** ( 132)
(MISSING) I NO REPLY
          I
          I.....I.....I.....I.....I.....I
          0         40        80       120      160      200
          FREQUENCY

```

MEAN 2.802 MEDIAN 2.518 MODE 2.000

VALID CASES 353 MISSING CASES 132

QUES33 USEFULNESS OF MORE ON WRM MANAGEMENT
CODE

```

      I
1. ***** (    40)
   I  VERY USEFUL
   I
   I
2. ***** (    44)
   I  USEFUL
   I
   I
3. ***** (    70)
   I  SLIGHTLY USEFUL
   I
   I
4. ***** (   100)
   I  NEUTRAL
   I
   I
5. ***** (    37)
   I  SLIGHTLY USELESS
   I
   I
6. ***** (    26)
   I  USELESS
   I
   I
7. ***** (    32)
   I  VERY USELESS
   I
   I
0. ***** (   136)
(MISSING) I  NO REPLY
      I
      I.....I.....I.....I.....I.....I.....I
      0          40          80          120          160          200
      FREQUENCY

MEAN      3.734      MEDIAN      3.705      MODE      4.000

VALID CASES      349      MISSING CASES      136

```

```

1. ***** ( 76)
   I  VERY USEFUL
   I
   I
2. ***** ( 72)
   I  USEFUL
   I
   I
3. ***** ( 59)
   I  SLIGHTLY USEFUL
   I
   I
4. ***** ( 68)
   I  NEUTRAL
   I
   I
5. ***** ( 34)
   I  SLIGHTLY USELESS
   I
   I
6. ***** ( 19)
   I  USELESS
   I
   I
7. ***** ( 23)
   I  VERY USELESS
   I
   I
0. ***** ( 134)
(MISSING) I  NO REPLY
          I
          I.....I.....I.....I.....I.....I.....I
          0          40          80          120          160          200
          FREQUENCY

MEAN      3.174      MEDIAN      2.966      MODE      1.000

VALID CASES      35      MISSING CASES      134

```

QUES35 HOW USEFUL MORE ON EQUIPMENT MANAGEMENT
CODE

```

      I
1. ***** ( 34)
   I  VERY USEFUL
   I
   I
2. ***** ( 53)
   I  USEFUL
   I
   I
3. ***** ( 66)
   I  SLIGHTLY USEFUL
   I
   I
4. ***** ( 102)
   I  NEUTRAL
   I
   I
5. ***** ( 38)
   I  SLIGHTLY USELESS
   I
   I
6. ***** ( 39)
   I  USELESS
   I
   I
7. ***** ( 19)
   I  VERY USELESS
   I
   I
0. ***** ( 134)
(MISSING) I  NO REPLY
      I
      I.....I.....I.....I.....I.....I.....I
      0          40          80          120          160          200
      FREQUENCY

MEAN      3.712      MEDIAN      3.721      MOD      4.000

VALID CASES      351      MISSING CASES      134

```

```

I
1. ***** (    145)
   I VERY USEFUL
   I
   I
2. ***** (    106)
   I USEFUL
   I
   I
3. ***** (     58)
   I SLIGHTLY USEFUL
   I
   I
4. ***** (     25)
   I NEUTRAL
   I
   I
5. *** (       8)
   I SLIGHTLY USELESS
   I
   I
6. ** (        3)
   I USELESS
   I
   I
7. ** (        5)
   I VERY USELESS
   I
   I
0. ***** (    135)
(MISSING) I NO REPLY
          I
          I.....I.....I.....I.....I.....I.....!
          0         40        80       120      160      200
          FREQUENCY

MEAN           2.069      MEDIAN       1.783      MODE              1.000

VALID CASES    350      MISSING CASES  135

```

QUES37 MORE ON THE SUPPLY ROLE IN MOBILITY
CODE

1.	***** (84)				
	I VERY USEFUL				
	I				
	I				
2.	***** (74)				
	I USEFUL				
	I				
	I				
3.	***** (78)				
	I SLIGHTLY USEFUL				
	I				
	I				
4.	***** (59)				
	I NEUTRAL				
	I				
	I				
5.	***** (29)				
	I SLIGHTLY USELESS				
	I				
	I				
6.	***** (14)				
	I USELESS				
	I				
	I				
7.	**** (11)				
	I VERY USELESS				
	I				
	I				
0.	***** (137)				
(MISSING)	I NO REPLY				
	I				
	I.....I.....I.....I.....I.....I.....I				
	0 40 80 120 160 200				
	FREQUENCY				
MEAN	2.882	MEDIAN	2.705	MODE	1.000
VALID CASES	348	MISSING CASES	137		

QUES38 MORE ON THE SBSS ORGANIZATION STRUCTURE
CODE

```

      I
1. ***** ( 46)
   I  VERY USEFUL
   I
   I
2. ***** ( 52)
   I  USEFUL
   I
   I
3. ***** ( 65)
   I  SLIGHTLY USEFUL
   I
   I
4. ***** ( 109)
   I  NEUTRAL
   I
   I
5. ***** ( 35)
   I  SLIGHTLY USELESS
   I
   I
6. ***** ( 17)
   I  USELESS
   I
   I
7. ***** ( 25)
   I  VERY USELESS
   I
   I
0. ***** ( 136)
(MISSING) I  NO REPLY
          I
          I.....I.....I.....I.....I.....I.....I
          0         40        80       120      160      200
          FREQUENCY

MEAN      3.533      MEDIAN    3.606      MODE      4.000

VALID CASES    349      MISSING CASES    136

```

QUES39 MORE ON COMPUTER SCHEDULING & LISTINGS

CODE

	I				
1.	***** (42)				
	I VERY USEFUL				
	I				
	I				
2.	***** (54)				
	I USEFUL				
	I				
	I				
3.	***** (76)				
	I SLIGHTLY USEFUL				
	I				
	I				
4.	***** (83)				
	I NEUTRAL				
	I				
	I				
5.	***** (41)				
	I SLIGHTLY USELESS				
	I				
	I				
6.	***** (26)				
	I USELESS				
	I				
	I				
7.	***** (26)				
	I VERY USELESS				
	I				
	I				
0.	***** (137)				
(MISSING)	I NO REPLY				
	I				
	I.....I.....I.....I.....I.....I.....I				
	0 40 80 120 160 200				
	FREQUENCY				
MEAN	3.601	MEDIAN	3.524	MODE	4.000
VALID CASES	348	MISSING CASES	137		

QUES40 MORE ON RECORDS MAINTENANCE
CODE

```

1. ***** ( 36)
   I VERY USEFUL
   I
   I
2. ***** ( 51)
   I USEFUL
   I
   I
3. ***** ( 93)
   I SLIGHTLY USEFUL
   I
   I
4. ***** ( 84)
   I NEUTRAL
   I
   I
5. ***** ( 50)
   I SLIGHTLY USELESS
   I
   I
6. ***** ( 16)
   I USELESS
   I
   I
7. ***** ( 20)
   I VERY USELESS
   I
   I
0. ***** ( 135)
(MISSING) I NO REPLY
          I
          I.....I.....I.....I.....I.....I.....I
          0         40        80       120      160      200
          FREQUENCY

MEAN      3.540      MEDIAN    3.446      MODE      3.000

VALID CASES    350      MISSING CASES    135

```

QUES4i MORE ON DELINQUENT REJECT & DOCUMENT LIS
CODE

- I
1. ***** (81)
I VERY USEFUL
I
I
2. ***** (87)
I USEFUL
I
I
3. ***** (81)
I SLIGHTLY USEFUL
I
I
4. ***** (56)
I NEUTRAL
I
I
5. ***** (21)
I SLIGHTLY USELESS
I
I
6. **** (13)
I USELESS
I
I
7. ***** (14)
I VERY USELESS
I
I
0. ***** (132)
(MISSING) I NO REPLY
I

.....I.....I.....I.....I.....I.....I.....I
0 40 80 120 160 200
FREQUENCY

MEAN 2.841 MEDIAN 2.605 MODE 2.000
VALID CASES 353 MISSING CASES 132

QUES42 MORE ON INVENTORY PROCEDURES
CODE

```

1. ***** ( 46)
   I  VERY USEFUL
   I
   I
2. ***** ( 65)
   I  USEFUL
   I
   I
3. ***** ( 90)
   I  SLIGHTLY USEFUL
   I
   I
4. ***** ( 95)
   I  NEUTRAL
   I
   I
5. ***** ( 35)
   I  SLIGHTLY USELESS
   I
   I
6. **** ( 10)
   I  USELESS
   I
   I
7. **** ( 11)
   I  VERY USELESS
   I
   I
8. ***** ( 133)
(MISSING) I  NO REPLY
          I
          I.....I.....I.....I.....I.....I.....I
          0          40          80          120          160          200
          FREQUENCY

MEAN      3.233      MEDIAN    3.222      MODE      4.000

VALID CASES    352      MISSING CASES    133

```

QUES43 MORE ON SBSS MGMT PRODUCTS

CODE

```

1. ***** ( 181)
   I  VERY USEFUL
   I
   I
2. ***** ( 85)
   I  USEFUL
   I
   I
3. ***** ( 40)
   I  SLIGHTLY USEFUL
   I
   I
4. ***** ( 29)
   I  NEUTRAL
   I
   I
5. *** ( 7)
   I  SLIGHTLY USELESS
   I
   I
6. ** ( 3)
   I  USELESS
   I
   I
7. *** ( 8)
   I  VERY USELESS
   I
   I
0. ***** ( 132)
(MISSING) I  NO REPLY
          I
          I.....I.....I.....I.....I.....I
          0         40        80       120       160       200
          FREQUENCY

```

MEAN	1.972	MEDIAN	1.475	MODE	1.000
------	-------	--------	-------	------	-------

VALID CASES	353	MISSING CASES	132
-------------	-----	---------------	-----

QUES44 USEFULNESS OF MORE ON DEMAND PROCESSING
CODE

```

1. ***** ( 101)
I VERY USEFUL
I
I
2. ***** ( 87)
I USEFUL
I
I
3. ***** ( 81)
I SLIGHTLY USEFUL
I
I
4. ***** ( 61)
I NEUTRAL
I
I
5. **** ( 13)
I SLIGHTLY USELESS
I
I
6. ** ( 4)
I USELESS
I
I
7. ** ( 5)
I VERY USELESS
I
I
0. ***** ( 132)
(MISSING) I NO REPLY
I
I.....I.....I.....I.....I
0 40 80 120 160 200
FREQUENCY

```

MEAN	2.517	MEDIAN	2.362	MODE	1.000
VALID CASES	352	MISSING CASES	133		

```

1. ***** ( 122)
   I  VERY USEFUL
   I
   I
2. ***** ( 91)
   I  USEFUL
   I
   I
3. ***** ( 67)
   I  SLIGHTLY USEFUL
   I
   I
4. ***** ( 49)
   I  NEUTRAL
   I
   I
5. **** ( 10)
   I  SLIGHTLY USELESS
   I
   I
6. *** ( 7)
   I  USELESS
   I
   I
7. *** ( 6)
   I  VERY USELESS
   I
   I
0. ***** ( 133)
(MISSING) I  NO REPLY
          I
          I.....I.....I.....I.....I.....I.....I
          0          40          80          120          160          200
          FREQUENCY

MEAN      2.372      MEDIAN      2.093      MODE      1.000

VALID CASES      352      MISSING CASES      133

```


QUES46 USEFULNESS OF MORE ON BENCH STOCK MGMT
CODE

	I				
1.	***** (66)				
	I VERY USEFUL				
	I				
	I				
2.	***** (79)				
	I USEFUL				
	I				
	I				
3.	***** (98)				
	I SLIGHTLY USEFUL				
	I				
	I				
4.	***** (76)				
	I NEUTRAL				
	I				
	I				
5.	***** (19)				
	I SLIGHTLY USELESS				
	I				
	I				
6.	**** (11)				
	I USELESS				
	I				
	I				
7.	** (5)				
	I VERY USELESS				
	I				
	I				
0.	***** (131)				
(MISSING)	I NO REPLY				
	I				
	I.....I.....I.....I.....I.....I.....I				
	0 40 80 120 160 200				
	FREQUENCY				
MEAN	2.876	MEDIAN	2.827	MODE	3.000
VALID CASES	354	MISSING CASES	131		

QUES47 USEFULNESS OF MORE ON RETAIL OUTLET MGMT
CODE

```

1. ***** ( 55)
   I VERY USEFUL
   I
   I
2. ***** ( 65)
   I USEFUL
   I
   I
3. ***** ( 95)
   I SLIGHTLY USEFUL
   I
   I
4. ***** ( 92)
   I NEUTRAL
   I
   I
5. ***** ( 29)
   I SLIGHTLY USELESS
   I
   I
6. ***** ( 11)
   I USELESS
   I
   I
7. ** ( 5)
   I VERY USELESS
   I
   I
0. ***** ( 133)
(MISSING) I NO REPLY
          I
          I.....I.....I.....I.....I.....I.....I
          0         40        80       120       160       200
          FREQUENCY

```

MEAN	3.080	MEDIAN	3.089	MODE	3.000
VALID CASES	352	MISSING CASES	133		

QUES48 MORE ON REQUISITION PROCEDURES
CODE

```

1. ***** ( 131)
   I  VERY USEFUL
   I
   I
2. ***** ( 101)
   I  USEFUL
   I
   I
3. ***** ( 76)
   I  SLIGHTLY USEFUL
   I
   I
4. ***** ( 34)
   I  NEUTRAL
   I
   I
5. ** ( 5)
   I  SLIGHTLY USELESS
   I
   I
6. ** ( 4)
   I  USELESS
   I
   I
7. ** ( 3)
   I  VERY USELESS
   I
   I
0. ***** ( 131)
(MISSING) I  NO REPLY
          I
          I.....I.....I.....I.....I
          0         40        80       120      160      200
          FREQUENCY

MEAN      2.167      MEDIAN    1.955      MODE      1.000

VALID CASES    354      MISSING CASES    131

```

QUES49 MORE ON STOCK FUND MANAGEMENT PRODUCTS
CODE

```

1. ***** ( 91)
   I  VERY USEFUL
   I
   I
2. ***** ( 68)
   I  USEFUL
   I
   I
3. ***** ( 83)
   I  SLIGHTLY USEFUL
   I
   I
4. ***** ( 56)
   I  NEUTRAL
   I
   I
5. ***** ( 24)
   I  SLIGHTLY USELESS
   I
   I
6. ***** ( 12)
   I  USELESS
   I
   I
7. ***** ( 16)
   I  VERY USELESS
   I
   I
0. ***** ( 135)
(MISSING) I  NO REPLY
          I
          I.....I.....I.....I.....I.....I.....I
          0         40        80       120      160      200
          FREQUENCY

```

MEAN	2.869	MEDIAN	2.693	MODE	1.000
VALID CASES	350	MISSING CASES	135		

QUES50 USEFULNESS OF MORE ON INQUIRY ANALYSIS
CODE

```

1. ***** ( 146)
I VERY USEFUL
I
I
2. ***** ( 78)
I USEFUL
I
I
3. ***** ( 63)
I SLIGHTLY USEFUL
I
I
4. ***** ( 46)
I NEUTRAL
I
I
5. *** ( 8)
I SLIGHTLY USELESS
I
I
6. *** ( 6)
I USELESS
I
I
7. *** ( 7)
I VERY USELESS
I
I
0. ***** ( 131)
(MISSING) I NO REPLY
I
I.....I.....I.....I.....I.....I
0          40          80          120          160          200
FREQUENCY

MEAN      2.260      MEDIAN      1.897      MODE      1.000
VALID CASES      354      MISSING CASES      131

```

QUES51 USEFULNESS OF MORE ON TRANS-DOC REGISTER
CODE

```

1. ***** ( 127)
   I VERY USEFUL
   I
   I
2. ***** ( 87)
   I USEFUL
   I
   I
3. ***** ( 65)
   I SLIGHTLY USEFUL
   I
   I
4. ***** ( 45)
   I NEUTRAL
   I
   I
5. ***** ( 14)
   I SLIGHTLY USELESS
   I
   I
6. ***** ( 10)
   I USELESS
   I
   I
7. ** ( 5)
   I VERY USELESS
   I
   I
0. ***** ( 132)
(MISSING) I NO REPLY
          I
          I.....I.....I.....I.....I.....I.....I
          0         40        80       120       160       200
          FREQUENCY

```

MEAN 2.382 MEDIAN 2.069 MODE 1.000

VALID CASES 353 MISSING CASES 132

QUES52 USEFULNESS OF MORE ON M-32 ANALYSIS

CODE

```

1. ***** ( 177)
I VERY USEFUL
I
I
2. ***** ( 76)
I USEFUL
I
I
3. ***** ( 51)
I SLIGHTLY USEFUL
I
I
4. ***** ( 29)
I NEUTRAL
I
I
5. **** ( 10)
I SLIGHTLY USELESS
I
I
6. ** ( 4)
I USELESS
I
I
7. *** ( 7)
I VERY USELESS
I
I
0. ***** ( 131)
(MISSING) I NO REPLY
I
I.....I.....I.....I.....I.....I.....I
0 40 90 120 160 200
FREQUENCY

```

MEAN 2.037 MEDIAN 1.500 MODE 1.000

VALID CASES 354 MISSING CASES 131

QUEST3 WOULD YOU LIKE TO ADD ANYTHING NOT SHOW

CODE

```

1. ***** ( 90)
1 YES
1
1
2. ***** ( 256)
1 NO
1
1
0. ***** ( 139)
(MISSING) 1 NO REPLY
1
1.....1.....1.....1.....1.....1
0      100      200      300      400      500
FREQUENCY

MEAN      1.740      MEDIAN      1.824      MODE      2.000

VALID CASES      346      MISSING CASES      139
```


Bibliography

1. Air Force Institute of Technology. AFIT 1982-1984 Catalog. AFIT/RR, Wright-Patterson AFB OH.
2. Air Training Command. Technical Training: Training Evaluation. ATCR 52-12. Randolph Air Force Base TX: HQ ATC, 3 February 1984.
3. Anderson, Maj Woodrow A. Intensified Supplies Management - A Guide for Supply Officers. Unpublished report No. 0090-76. Air Command and Staff College, Maxwell AFB AL, 1976 (LD 36175A).
4. Bair, 1st Lt Timothy D. and Capt Clinton F. Gatewood. A Critical Survey of Aircraft Maintenance Officer Training and Career Development. MS thesis, LSSR 57-82. School of Systems and Logistics, Air Force Institute of Technology (AU), Wright-Patterson AFB OH, September 1982 (AD-A122 998).
5. Ball, Lt Col David C. "1984 Logistics Conference Minutes," Sheppard Technical Training Center TX, 20 March through 23 March 1984. Minutes distributed by HQ USAF/LEYM.
6. Brown, Capt Kenneth R. and Capt David M. Hollingsworth. An Analysis of the Usefulness of the Graduate Logistics Program. MS thesis, LSSR 14-79A. School of Systems and Logistics, Air Force Institute of Technology (AU), Wright-Patterson AFB OH, June 1979 (AD-A072 620).
7. Cleary, Michael J. and Robert T. Amsden. A Data Analysis Handbook Using the SPSS System. Ann Arbor MI: Braun-Brumfield, Inc., 1980.
8. Concannon, Capt Michael R. and Capt Robert E. Grate. The Development and Test of a Job Inventory for a Job Analysis of the AFSC 64XX Supply Officer Utilization Field. MS thesis, SLSR 1-70. School of Systems and Logistics, Air Force Institute of Technology (AU), Wright-Patterson AFB OH, August 1970 (AD884 159).
9. Conover, W.J. Practical Nonparametric Statistics (Second Edition). New York: John Wiley & Sons, 1980.
10. Department of the Air Force. Military Personnel: Military Personnel Classification Policy. AFR 35-1. Washington: HQ USAF, 1 March 1983.
11. ----- Officer Personnel: Officer Career Development. AFR 36-23. Washington: HQ USAF, 26 December 1979.
12. ----- Officer Personnel: Officer Career Information. AFR 36-22. Washington: HQ USAF, 10 May 1982.
13. ----- Officer Personnel: Officer Classification. AFR 36-1. Washington: HQ USAF, 1 January 1984.

14. ----- Schools: Air Force Precommissioning Professional Military Education (PME) Requirements. AFR 53-1. Washington: HQ USAF, 10 July 1981.
15. ----- Schools: USAF Officer Professional Military Education System. AFR 53-8. Washington: HQ USAF, 16 December 1980.
16. ----- Training: USAF Formal Schools. AFR 50-5. Washington: HQ USAF, 1 March 1984.
17. Dobias, Maj Leonard J. An Analysis of Management Development in the Air Force. Unpublished report No. 0785-74. Air Command and Staff College, Maxwell AFB AL, 1974 (AD 920853L).
18. Drake, William R. and Capt Michael F. Loughman, Jr. An Analysis of the 64XX AFSC Within AFLC. MS thesis, SLSR 24-74A. School of Systems and Logistics, Air Force Institute of Technology (AU), Wright-Patterson AFB OH, January 1974 (AD777 251).
19. Emory, C. William. Business Research Methods. Homewood IL: Richard D. Irwin, Inc., 1980.
20. Fuqua, Dale R., et al. "Survey Research in Higher Education," Research in Higher Education, 17 (1): 69-80 (1982).
21. Hawley, Capt Lynn. Supply Career Management Staff Officer, Directorate of Personnel Resources and Distribution, AFMPC, Randolph AFB TX. Telephone interview. 7 February 1984.
22. Hull, C. Hadlai and Norman H. Nie. SPSS Update 7 - 9. New York: McGraw-Hill Book Company, 1981.
23. Johnson, Lt Col Richmond E. and Colonel Robert L. Shipman. "Wholesale Logistics System," Managing the Air Force (Fourth Edition). Maxwell Air Force Base AL: Air War College, 1983.
24. Kanuk, Leslie and Conrad Berenson. "Mail Surveys and Response Rates: A Literature Review," Journal of Marketing Research, 12 (4): 440-453 (November 1975).
25. Kerins, Capt Brian R. and Capt Ray A. Kiracofe. Transportation Staff Officer Development: A Needs Assessment. MS thesis, LSSR 30-83. School of Systems and Logistics, Air Force Institute of Technology (AU), Wright-Patterson AFB OH, September 1983 (AD-A134 401).
26. Kimball, Andrew E. "Increasing the Rate of Return in Mail Surveys," Journal of Marketing, 25 (6): 63-64 (October 1961).
27. Kuhlman, Norman H.C., et al. Supply Management. Washington: National Defense University, 1980.

28. Lord, Ernest R. "Training Evaluation Report G30BR6421-001, Supply Operations Officer." Lowry Technical Training Center (ATC), Lowry AFB CO, January 1983.
29. McClave, James T. and P. George Benson. Statistics for Business and Economics (Second Edition). San Francisco CA: Dellen Publishing Company, 1982.
30. Nettles, Maj Thomas C. Handbook for New Supply Officers. Unpublished report No. 1805-80. Air Command and Staff College, Maxwell AFB AL, 1980 (LD 47062A).
31. Nie, Norman H., et al. Statistical Package for the Social Sciences (Second Edition). New York: McGraw-Hill Book Company, 1975.
32. Pierce, Albert. Fundamentals of Nonparametric Statistics. Belmont CA: Dickinson Publishing Company, Inc., 1970.
33. Schmitt, Col Arthur E. "Retail Logistics System," Managing the Air Force (Fourth Edition). Maxwell Air Force Base AL: Air War College, 1983.
34. Siegel, Stanley. Nonparametric Statistics for the Behavioral Sciences. New York: McGraw-Hill Book Company, 1956.
35. Truskie, Stanley E. "Getting the Most from Management Development Programs," Personnel Journal, 61 (1): 66-68 (January 1982).
36. United States Air Force Technical Training School. Plan of Instruction G30BR6421-001, Supply Operations Officer. Lowry Technical Training Center (ATC), Lowry AFB CO, March 1980.
37. ----- Plan of Instruction G30ZR6424-001, Supply Systems Management Reports and Listings. Lowry Technical Training Center (ATC), Lowry AFB CO, July 1982.
38. Weaver, Dr. Robert B. Associate Professor of Communication, School of Systems and Logistics. Air Force Institute of Technology, Wright-Patterson AFB OH. Personal interview. 25 January 1984.
39. Yu, Julie and Harris Cooper. "A Quantitative Review of Research Design Effects on Response Rates to Questionnaires," Journal of Marketing Research, 20 (1): 36-44 (February 1983).

VITA

Captain Edmund R. Brodeur, Jr. was born 2 August 1947 in Norfolk, Virginia. He graduated from high school in Virginia Beach, Virginia in 1965 and enlisted in the U.S. Navy and served until 1971. While working as a civil service employee in supply he attended National University in San Diego, California from which he received his Bachelor of Arts in Business Administration in 1979. Upon graduation he applied to the USAF Officer Training School, was accepted and commissioned on 6 June 1980. He attended supply officer training at Lowry AFB, Colorado and was assigned to the 832nd Supply Squadron, Luke AFB, Arizona until entering the School of Systems and Logistics, Air Force Institute of Technology, in June 1983.

Permanent address: 4081 Elbow Rd.

Virginia Beach, Virginia

23456

VITA

Captain Karen W. Currie was born on 18 August 1954 at Ft. Leavenworth, Kansas, to an Air Force family. After attending 11 different schools, she graduated from Upper St. Clair High School, near Pittsburgh, Pennsylvania, in 1972. She received a Bachelor of Arts degree in English with a minor in Political Science from Duquesne University, Pittsburgh in 1976. She then attended the University of Kentucky on a Patterson Fellowship, earning a Master of Arts degree in Diplomacy from Kentucky's Patterson School of Diplomacy and International Commerce in 1977. After a brief period of civilian employment, she entered the USAF Officer Training School and was commissioned in May 1979. Her first three years of service were spent at the Air Force Manpower and Personnel Center, Randolph AFB, Texas, as an administrative and personnel staff officer. She then served one year as the Executive Administrator for the School of Systems and Logistics, Air Force Institute of Technology, before entering the School of Systems and Logistics in June 1983.

Permanent address: 294 Hays Road

Upper St. Clair, Pennsylvania

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Headquarters Air Training Command is currently working several initiatives to improve technical training for officers in the Supply Management Utilization Field (AFSC 64XX). This research project was designed to determine if company grade supply officers found their initial technical training adequate and how supply technical training could be improved. The researchers surveyed all Air Force company grade supply officers regarding their perceptions of the adequacy of their initial technical training, the Supply Operations Officer Course (SOOC). The mail survey asked the officers to indicate whether or not additional topics should be added to the SOOC. They were also asked to indicate the usefulness of a suggested list of topics and to write in any potential topics not listed. The survey concluded with requests for demographic information such as rank, sex, education level, type of degree, length of service, and so on. Sixty-one percent of the surveys were returned. Two hundred and twelve returned comment sheets included suggestions for improving supply officer training. Statistical analysis of the data indicated initial technical training for supply officers needs improvement. While basically satisfied with the structure of the SOOC, respondents indicated a desire for training to be more technically oriented, with emphasis placed on interpreting computer-generated management products and using them to solve branch problems. Most significantly, respondents demonstrated strong belief in the value of practical job experience as a prerequisite to attending initial technical training. Those officers who showed the strongest dissatisfaction with their technical training were those, in most cases, with less than four years of Air Force supply experience. Formal on-the-job (OJT) programs for new supply officers, coupled with revised initial technical training, would provide the greatest benefit to the Air Force and the officers themselves. Specific suggestions for revising initial technical training are presented.